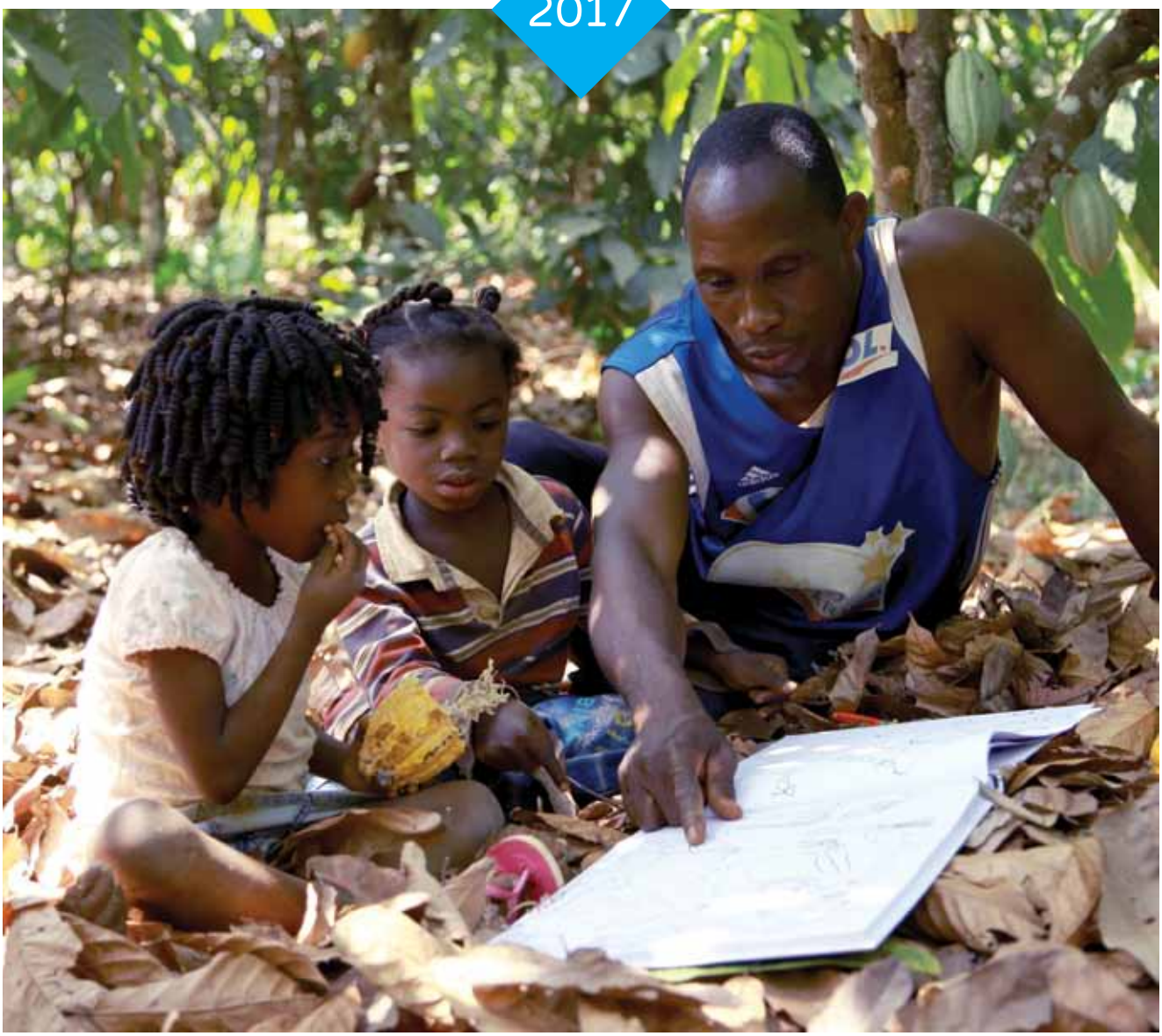
Early Childhood Matters

Advances in early childhood development

2017



Bernard van Leer FOUNDATION

Early Childhood Matters aims to elevate key issues, spread awareness of promising solutions to support holistic child development and explore the elements needed to take those solutions to scale. It is published annually 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.

© Bernard van Leer Foundation, 2017
Reproduction of articles by photocopying or electronic means for non-commercial purposes is permitted. However, it is requested that the author, *Early Childhood Matters* and Bernard van Leer Foundation are cited as the source of the information. Permission must be obtained to use photos.
ISSN 1387-9553

Cover: Prisca (in the middle) with her dad and her cousin, looking at a book under a cacao tree. Gohou-Zagnan, Côte d'Ivoire.
Photo: Thibaut Monnier (Ayoukit)/Bernard van Leer Foundation

This 2017 issue of *Early Childhood Matters* is no. 126 in the series. Also published in Spanish: *Espacio para la Infancia* (ISSN 1566-6476)

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 editing: Margaret Mellor
Design: Roquefort Ontwerpers

Early Childhood Matters

Advances in early childhood development

2017

TABLE OF CONTENTS

Editorial

4 **Moving towards scale: advancing early childhood development 2017**
— *Joan Lombardi*

LEADERSHIP

10 **'Chile Crece Contigo': 10 years on**
— *Michelle Bachelet Jeria*

15 **The best investment societies can make**
— *Jim Yong Kim*

BREAKTHROUGH IDEAS

20 **Big surprises from little brains**
— *Patricia K. Kuhl*

26 **The Global Journalism Institute on Early Childhood and the Developing Brain**
— *Karen Brown*

29 **Early learning and nurturing care for children displaced by conflict and persecution**
— *Nada Elattar and Katie Maeve Murphy*

32 **Public–private partnership for early childhood: a chance to improve Romania's competitiveness**
— *Carmen Lica*

35 **The Kids in Communities Study: what is it about where you live that makes a difference to children's development?**
— *Sharon Goldfeld and Karen Villanueva*

40 **Mothers of Rotterdam: a new medical and social support programme for vulnerable pregnant women**
— *Johanna P. de Graaf, Marijke W. de Groot, Marije van der Hulst, Loes C.M. Bertens and Eric A.P. Steegers*

44 **Nurturing the next generation of early childhood leaders**
— *Rachel Machefsky*

SCALING

50 **Accelerating the effective scaling of Kangaroo Mother Care and related interventions: lessons from 20 years of experience**
— *Nathaniel Foote and Giorgio Tamburlini*

56 **Promoting positive parenting practices in Niger through a cash transfer programme**
— *Oumar Barry , Ali Mory Maïdoka and Patrick Premand*

61 **From small to scale: the expansion of pre-primary in Bangladesh**
— *Zannatun Zahar and Khosneara Khondker*

Standards and quality

66 **Promoting high-quality childcare at scale in Latin America**
— *M. Caridad Araujo*

70 **Quality standards for early childhood services: examples from South and South East Asia**
— *Sandipan Paul*

Financing

74 **The Power of Nutrition: innovative financing for the next generation**
— *Martin Short and Mavis Owusu-Gyamfi*

78 **Better policies for improved financing of services for young children**
— *Arjun Upadhyay and Vidya Putcha*

Monitoring and data

83 **The international Guide for Monitoring Child Development: enabling individualised interventions**
— *İlgi Öztürk Ertem*

88 **Building national early childhood data systems: laying the groundwork for equitable, quality early childhood services**
— *Abbie Raikes and Ivelina Borisova*

Global networks

93 **The Early Childhood Development Action Network: a global network to strengthen support for young children**
— *Lucy Bassett and Ana Nieto*

Moving towards scale: advancing early childhood development 2017

Joan Lombardi
Senior Advisor, Bernard van Leer Foundation

Each day a baby is born, we feel hope, we sense their potential. Over the past year we were reminded of both the importance of promoting healthy child development and the challenges that lay ahead as we move from a scattering of single programmes to scaling quality supports for young children and families around the world.

As the *Lancet* Early Childhood Development Series (2016) reminded us at the close of last year, 'Young children's healthy development depends on nurturing care – care which ensures health, nutrition, responsive caregiving, safety and security, and early learning.' These aspects of nurturance are indivisible, like the domains of development that they represent; hence the need for integrated services that start as early as possible and span the life course. The call for scaling such supports was underscored by the staggering facts also reported in the *Lancet* Series: an estimated 250 million children under 5 in low- and middle-income countries are at risk of not meeting their developmental potential. The cost of inaction is too high, making immediate action a clear and urgent priority.

The good news is that we are seeing promising signs of movement towards scaling to support nurturing care. By scaling we mean expanding and improving services to a greater number of children and families, within a community or across communities. The movement towards scale includes important precursors to change: more vocal and visible champions, growing evidence of effective services, ongoing dialogue about implementation issues. While the political will to invest is still nascent, the awareness of the importance of the early years to long-term health, behaviour and learning continues to grow.

Leadership

Moving to scale does not just happen; it takes strong and decisive leadership. We are particularly honoured to launch the 2017 issue of *Early Childhood Matters* with the voices of two great champions for early childhood development: Michelle Bachelet Jeria, President of Chile, and Dr Jim Yong Kim, President of the World Bank Group. President Bachelet has been a longstanding champion for the rights of children. Her efforts to launch 'Chile Crece Contigo' a decade ago has served as a model for scaling integrated services for young children and families around the world. Dr Jim Kim's clear and powerful message – that investing in the early years is important to both child development and a nation's economic growth – is a critically important

statement from an influential leader. His willingness to take this message to policymakers around the world has the potential to bring about revolutionary change and improvements in the well-being of young children and families, particularly for those most vulnerable. We celebrate the leadership of these two important champions for children.

Breakthrough ideas

The field of early childhood is still evolving. While we are getting closer to understanding the importance of providing continuous quality services across the early years, to be effective we need to continue to innovate, learn and adapt. This need to look for new ideas and to evolve as a field is true for every aspect of the work to improve the lives of young children; from the need to continue to explore new aspects of the science of child development, to efforts to build public awareness, to the search for effective service delivery strategies.

In this section of the journal we present seven innovations, starting with the work of Dr Patricia Kuhl, whose groundbreaking work has contributed to the explosion of information on early brain development. From her research lab in Seattle, she documents the importance of early social interactions to learning and overall development. Recognising the importance of bringing brain science to a wider audience, Karen Brown tells us about the recent launch of the Global Journalism Institute on Early Childhood and the Developing Brain, an exciting effort organised by the Dart Center for Journalism and Trauma at Columbia University. The Institute brought together a group of journalists from around the world to better understand the science of early childhood as well as the implications. It is this combination of scientific inquiry and communication that is helping to fuel the interest in the early years of life.

'We are at an important turning point in the journey to assure that all children are successful early in life. The momentum is with us.'

Continuing the theme of innovation, we turn to the bold and creative efforts of Sesame Workshop and the International Rescue Committee to encourage and support nurturing care for the children and families affected by the conflict in Syria. Nada Elattar and Katie Murphy share the ongoing work and innovative plans to use a multimedia approach to addressing the needs of children in crisis. This effort has the potential of not only reaching children and families suffering from the immediate conflicts around the world, but also to shine a spotlight on the overall needs of young children and families during emergencies and to expand the concept of humanitarian assistance to include stepped-up efforts to support families with young children.

Moving from the media back to the national and local levels, we highlight three emerging efforts including an innovative partnership to reach the private sector, a study of the ecosystem in communities and the effects it has on young children, and a new effort to support vulnerable pregnant women. While these three articles are very different, all three contribute to knowledge development and the search for new and innovative ways to serve young children and families and build ongoing support. Carmen Lica provides us with a reflection on the

important work being done to reach out to the business community in Romania. Professor Sharon Goldfeld and Dr Karen Villanueva from Melbourne, Australia, highlight the Kids in Communities Study, taking an ecological approach, and setting forth a clear conceptual framework for exploring the 'community domains' that may impact on early development. The results of this study have the potential to provide important insight into the impact of community on child development. Staying with the local theme, we turn to the article by de Graaf, de Groot, van der Hulst, Bertens and Steegers which provides a snapshot of Mothers of Rotterdam, an emerging initiative to create new medical and social support programmes for vulnerable pregnant women, an area of early childhood too often ignored.

Finally, we conclude the section on breakthrough ideas with Rachel Machefsky's important article on the trends in leadership development in the field of early childhood. This article is based on interviews and information from four leadership programmes including two well-established efforts as well as two new and exciting initiatives. Together these innovations are helping to build the capacity of the field and create a new cohort of leaders so important to our ability to move forward on behalf of young children.

△ *Photo: © iStock.com/splendens*

Scaling

While all of these efforts address various aspects of growth, this final section of the journal focuses on three concrete examples of scaling up and six articles highlighting implementation issues: assuring quality, financing, monitoring and measurement. We conclude with an update on the emerging global early childhood network which holds much promise for accelerating progress towards scale.

This section starts with the specific examples of scaling which provide a snapshot of work going on around the world across the early years. In their article, Nathaniel Foote and Giorgio Tamburlini focus on Kangaroo Mother Care, an evidence-based intervention for improving the health and survival chances of premature and low-birthweight infants. They share important lessons learned over the years regarding implementation and strategies for the future. We then turn to two countries, Niger and Bangladesh, and their efforts to scale services. Oumar Barry, Ali Mory Maïdoka and Patrick Premand share the important initiative launched in Niger to bundle behaviour change efforts, supporting parenting practices conducive to early child development, with income supports. Rounding out this trio of examples, Zannatun Zahar and Khosneara Khondker chronicle the efforts in Bangladesh to expand pre-primary services.

'The movement towards scale includes important precursors to change: more vocal and visible champions, growing evidence of effective services, ongoing dialogue about implementation issues.'

There is a growing awareness that the success of scaling depends on some assurance that key elements of supportive infrastructure are in place. Two articles address quality issues: Maria Caridad Araujo discusses the rapid expansion of childcare in the Latin America region and sets forth a series of important recommendations to promote quality at scale. Moving to the South and South East Asia Region, Sandipan Paul outlines efforts in India, Singapore and the Philippines to establish programme standards.

Since the issue of financing is key to expansion and quality, we turn to two articles focused on bringing new resources into the system. Martin Short and Mavis Owusu-Gyamfi highlight the innovative financing model The Power of Nutrition, while Arjun Upadhyay and Vidya Putcha focus on improving policies to better finance services for young children. From early nutrition to early learning, it is clear that one of the greatest challenges is to secure substantial new resources to scale nurturing care.

A key part of making the case for early childhood provision is the importance of monitoring child development and creating coordinated data systems. Professor İlgi Öztürk Ertem shares a critical view and an important tool for monitoring and supporting individualised child development. At the same time, Abbie Raikes and Ivelina Borisova provide important insight into the need for population-level data, and present experiences from countries around the world.

We conclude this series of articles with an important update by Lucy Bassett and Ana Nieto on the emerging Early Childhood Development Action Network. This critical new partnership aims to strengthen support for young children and accelerate change around the world. Bassett and Nieto outline the rationale for such a network and how it will engage with countries around the world. During this formative period in the network's evolution, we remain hopeful that it will fulfill its potential and become a strong force for change.

Throughout this issue of *Early Childhood Matters*, we hope you will be encouraged by the variety of activities going on around the world in support of young children and families – from innovation to scaling, from research to service delivery, from capacity building to cooperation. We are at an important turning point in the journey to assure that all children are successful early in life. The momentum is with us. We hope the examples in this issue inspire, celebrate each step taken, and help us move forward to address the challenges ahead.

Reference

The Lancet. (2016). *Advancing Early Childhood Development: From science to scale. Executive Summary for the Lancet* Early Childhood Development Series. Available at: https://gmmb.app.box.com/s/ljwsqzto5y7ykbt1wfdv9eqor8jz9lzi (accessed May 2017).

LEADERSHIP

‘Chile Crece Contigo’: 10 years on

Michelle Bachelet Jeria
President of Chile

Chile has always had a tradition of protecting childhood. Since the mid-20th century, our approach acquired greater depth and intensity as a response to rising concern and a greater awareness of the issue across the world. Protection was focused, however, on trying to alleviate major food shortages and gaps in healthcare by providing supplementary food, vaccinations and basic medical care.

It is now 58 years since the United Nations adopted the Declaration of the Rights of the Child, and 28 years since the same organisation gave its approval to the Convention on the Rights of the Child (CRC), a text ratified by Chile in 1990. This means that 27 years ago – just a few months after democracy was restored – our country took on a clear and firm commitment to early childhood as an integrated and cross-cutting policy, picking up the four fundamental principles of the Convention: non-discrimination; the best interests of the child; the right to survival, development and protection; and having a say in decisions that affect them.

We have taken important steps to fulfil that commitment. Some of the biggest milestones can be seen in the *Ley de Filiación* of 1998, which put an end to the dreadful difference in legal status for children born outside marriage, and the introduction of new judicial proceedings in the family justice system in 2004 along with legislation for adoption that safeguards children’s interests, enabling them to live in a home where they feel loved and protected.

Undoubtedly one of the most significant milestones in ensuring that all boys and girls reach their full developmental potential came a decade ago, with the emergence of the ‘Chile Crece Contigo’ (‘Chile Grows With You’) system – the first systematic, inter-sectoral, structured policy for protecting early childhood rights was drawn up, with prenatal monitoring for mothers followed by an initial scope from birth to 4 years of age, which we have recently extended to age 9.

The CRC calls on states to protect and promote children’s full set of rights, by accompanying them throughout their development and taking action with specific protection or reinforcement measures when required. A task like this calls for a multidimensional response, one that can coordinate and strengthen the work done by different sectors, one that transcends presidential terms of office, setting itself up as a commitment to children undertaken by the state, rather than by any one particular government.

In other words, what we did was change our approach to working with early childhood.

△ *Photo: Courtesy Consejo Nacional de Infancia, Chile*

So, instead of each sector doing things their way, efforts were joined up, new programmes and benefits were created, community networks were put in place and we began to work differently with children. We started by monitoring mothers' pregnancies, carrying out healthy child check-ups, providing support for children's overall development and designing specific interventions, mainly in health, education and justice issues.

This change of paradigm, originally often regarded with suspicion, is now understood as being essential. Nowadays no one has any doubts about the importance of stimulation in the early years of a child's life. Today we all agree on the key issue of early detection when a child is falling behind, so we can act in time. Today nobody is surprised by the fact that the best investment that a country can make is in early childhood, tackling inequality at its roots by addressing the differences that separate population from infancy.

Results and expansion

We have seen concrete results. In the last ten years, nearly 2 million pregnant mothers were part of our parental monitoring scheme; we've encouraged the mother's partner or another family member to be present at the birth, and that now happens in six out of every ten cases; more than 1,600,000 boys and girls were born and protected by the system, and more than a million packages of clothes and other essentials were given to babies born in the public system.

Skin-to-skin contact for half an hour or more after birth is on the rise, reaching 76.3% in 2016. Plus, exclusive breastfeeding up to the sixth month also increased to 56.1% in 2016.

But we obviously have to go further than birth. Healthy child check-ups and monitoring children as they grow help to detect signs of developmental delay and allow us to refer them to specialists for specific forms of stimulation. Thanks to this, 42% of children who were found to be falling behind have now caught up.

'Undoubtedly one of the most significant milestones in assuring that all girls and boys reach their full developmental potential came a decade ago with the emergence of Chile Crece Contigo.'

Attending nursery school offers opportunities for development, and the net rate of nursery school attendance is 90% among children aged between 4 and 5. The most significant progress between 2006 and 2015 was in children from birth to 3 years: in 2006 the net attendance rate for this age group was 16.4%, and by 2015 it was 30% (Ministry of Social Development, 2016).

This is undoubtedly good news, especially at this moment, as we are in the process of expanding coverage provided by the system to children aged from 5 to 9. This expansion is being implemented along two new lines. First, through the mental health support programme, which will provide treatment for boys and girls aged between 5 and 9. We started running it in 23 municipalities and gradually extended it to benefit 18,600 children between 2016 and 2017. The second line of action is the integrated learning support programme, which uses stimulation and creativity tools like the 'Games Corner', which we are giving to all boys and girls of pre-kindergarten age in state-run schools and nurseries.

Simultaneously we will reinforce current programmes and add new interventions until we can cover all boys and girls between the ages of 5 and 9 who go to state-run schools in our country or who receive treatment in the state healthcare system.

Challenges

Although the system has now been developed across the whole country and is producing significant results, there are still challenges we must tackle. One of them is guaranteeing that the system operates at optimal level in each of the municipalities across the country, as there are still difficulties in delivering the service in the most appropriate and timely way.

There are also structural issues connected with inequality, poverty and violence that lead to stressful situations that mothers, fathers and carers find very difficult to cope with and that have a negative impact on children's development. Of these three, poverty is showing signs of steadily lessening across the country, but it is still higher in families with children than in the rest of the population as a whole. The pressure of these structural factors on children's lives means we must break the traditionally isolated nature of early childhood policy. So, our challenge at present is to join up early childhood policy with the country's more general development policies.

Likewise, developing and continually improving the system requires interventions with high levels of specific expertise. Taking on board the latest advances in early childhood knowledge and strategies involves implementing good-quality continuous training as well as teaching specific skills not normally covered in pre-university training courses. This requires input from cross-sector working networks and ongoing specialised technical assistance.

We also know that any social policy is constantly being refined, so that it can be managed more efficiently and effectively. This involves focusing on users, simplifying processes, instruments and access for the community, monitoring transparency in the way we use and assign resources, and promoting participatory processes. On this point, an important tool like the registration, referral and monitoring system run by Chile Crece Contigo must increase its information management capacity. It can do this by starting to use predictive or beneficiary segmentation models to forecast the appearance of risks, in terms of lifestyle, so that alerts can be issued and the right kind of services can be provided at the right time.

'We've encouraged the mother's partner or another family member to be present at the birth, and that now happens in six out of every ten cases.'

Childhood Rights Guarantee System

Chile Crece Contigo will form the operational basis of the future Childhood Rights Guarantee System, with which we expect to cover the entire population aged under 18.

In addition to reinforcing what is already up and running, this involves putting new sub-systems in place for other age groups. For the efficient execution and effective results we need a modular outlook. As Mary Beloff says, integrated childhood protection systems are 'a model for building' in which the pieces of a whole are gradually slotted into a large-scale system (Beloff, 1999). The Chile Crece Contigo experience shows that this takes both time and specific institutional support.

In the Ministry of Social Development, by the end of this administrative term (March 2018), we will have set up a cross-ministerial committee on social and childhood development with the office of the Undersecretary for Childhood from which Chile Crece Contigo will continue to be managed. Alongside this, boys and girls will have their own Children's Watchdog, an independent body that will ensure children's rights are respected, promoted and protected by the State.

This robust institutional structure will operate within a new regulatory framework that effectively safeguards both the recognition of children as subjects with rights and the exercise of those rights, with no discrimination whatsoever. So, in a 10-year cycle we will have laid the necessary foundations for protecting our children's development from early childhood and opened up a world of opportunities for them to reach their full potential. By doing this we'll be able to say to all our boys and girls – consistently and coherently – 'Chile Grows With You!'

References

Beloff, M. (1999) Modelo de protección integral de los derechos del niño y de la situación irregular: un modelo para armar y otro para desarmar [Integrated model for protecting the rights of the child and the irregular situation model: one model for building and another for dismantling]. In: Beloff, M., Cillero, M., Cortés, J. and Couso, J. (eds) *Justicia y Derechos del Niño* N° 1. Santiago: Unicef. Available at: http://www.unicef.cl/archivos_documento/68/Justicia y derechos.pdf (accessed May 2017).

Ministry of Social Development, Government of Chile. (2016). Social Observatory: CASEN 2015 survey. Educación: Síntesis de resultados. Available at: http://observatorio.ministeriodesarrollosocial.gob.cl/casen-multidimensional/casen/docs/CASEN_2015_Resultados_educacion.pdf (accessed May 2017).

The best investment societies can make

Jim Yong Kim
President, World Bank Group, Washington DC, USA

As the digital economy continues to accelerate, policymakers around the world are grappling with how to prepare workers for the fourth industrial revolution. We don't know what new technologies and scientific breakthroughs will remake the world in the next few decades, but one thing is certain: the economies of the future will require a workforce that can reason, analyse, collaborate, and quickly adapt to keep pace with innovation. So the best investment societies can make is in developing these skills in their future workforce – and this starts with investing early to develop the grey matter infrastructure of young minds.

Investing in the early years not only transforms a child's life; it can alter the trajectory of a nation's growth and competitiveness. Thanks to a growing body of scientific evidence, we now understand better than ever before that investments in the early years – especially the first 1000 days of life during peak brain development – are critical to helping children achieve their full potential and escape the cycle of poverty.

Yet millions of children today are being hardwired for failure. The cognitive, physical and socioemotional development of an estimated 43% of children under 5 in low- and middle-income countries are at risk of being permanently stunted by malnutrition, lack of early stimulation and learning, or exposure to violence and neglect (Black *et al.*, 2016). The millions of children growing up in war zones and as refugees displaced by violence are particularly at risk because of the toxic stress they experience.

If children don't receive the right care and inputs during the critical window of brain development in their first 1000 days, they will never be able to fully benefit from later education, reducing their earning potential by as much as a quarter (Black *et al.*, 2016). Disadvantaged and malnourished mothers are three times more likely to have malnourished infants (Victora *et al.*, 2008), perpetuating a vicious cycle of intergenerational poverty.

At a societal level, poor early development acts as a drag on economic growth, exacerbating inequalities that can sow the seeds of unrest. The World Bank Group estimates that per capita GDP in sub-Saharan Africa and South Asia would be 9–10% higher today if countries had eliminated chronic malnutrition when today's workers were children. Globally, that figure is 7% (Galasso *et al.*, 2017).

The cost of inaction will only rise as future economies put an ever-higher premium on cognitive faculties. I worry that if this trend continues, the final common pathway for many countries may very well be fragility, conflict, violence, extremism and migration. An investment in grey matter development is really an investment in reducing insecurity in many parts of the world.

It is clear that we can't achieve our goals of ending extreme poverty and boosting shared prosperity unless we help every child reach his or her full potential. Therefore, we must act urgently to scale-up investments in young children's physical, cognitive, linguistic, and social development – not just in low-income countries, but also in middle-income countries where there is significant need.

Fortunately, we have strong evidence about what works and where to target investments for the greatest impact. There is growing research that the key to unlocking a child's potential is through an integrated, multi-sectoral approach that promotes nurturing care, stimulates learning, and protects children from disease, violence and stress.

The most effective national strategies empower families with the time, resources and skills to provide nurturing care. They target the most vulnerable young families with high-impact intervention packages that streamline service delivery and maximise cost savings. The World Bank Group, working with partners, has used the latest evidence to develop five such packages combining 25 services for families with young children. These packages require a 'whole of government approach' that coordinates delivery of services across sectors – health, nutrition, education, social protection, environmental conservation, water and sanitation.

'It is clear that we can't achieve our goals of ending extreme poverty and boosting shared prosperity unless we help every child reach his or her full potential.'

While investments in the first 1000 days make the greatest difference, access to pre-primary education ensures that development continues uninterrupted. Pre-primary education has been proven to be effective at preparing children with the skills to succeed in school, yet less than half of 3 to 6 year olds worldwide have access to pre-primary education. In sub-Saharan Africa, this number falls to 20% (UNESCO, online).

Senegal shows the dramatic results that can be achieved through a holistic, coordinated early years strategy. Thanks to strong political leadership at the highest levels, Senegal integrated a service delivery system and coordinated with NGOs and a vast network of community volunteers. The country reduced its stunting rate from more than 30% in the late 1990s, to approximately 18–19% in 2014, one of the lowest rates in sub-Saharan Africa (World Health Organization, online).

The best news is that the dramatic results experienced in Senegal can be achieved through low-cost interventions. Relatively modest early investment not only improves young children's development, it enhances the effectiveness of

△ *Photo: Enrico Fabian/World Bank*

other development interventions and spurs growth for decades. The World Bank Group estimates suggest that scaling-up efforts to reduce chronic malnutrition for 90% of the world population over the next decade would cost USD 7 billion per year (only USD 10 per child per year) (Shekar *et al.*, 2016), and would have a rate of return of 15–24%, with an average benefit–cost ratio of 15 to 1 (Galasso *et al.*, 2017). Other early childhood development investments also yield similar rates of return. Every dollar invested in quality preschool programmes, for example, will yield a return of USD 6–17 (Engle *et al.*, 2011).

The challenge now is to generate the political will to prioritise policy changes, coordination across sectors, and investments to ensure that every child has a chance to thrive. The World Bank Group has been working with governments to ensure that every country where we operate has a strong national strategy in place and the capacity to scale-up proven interventions. Policymakers increasingly recognise the importance of early childhood development, but we need more advocacy and, most importantly, more resources.

To keep the spotlight on the issue, the World Bank Group held a Human Capital Summit on Investing in the Early Years for Growth and Productivity in October 2016, where Ministers of Finance from nine countries pledged to improve nutrition, health, and education programmes for young children.

Given the magnitude of the challenge, and the need to quickly scale-up solutions, we need strong partnerships. We have been encouraged by the growing coalition advocating for early childhood development and stepping in on the financing side. The Global Financing Facility for the Every Woman Every Child initiative, the Early Learning Partnership, End Violence Against Children, Scaling Up Nutrition and the Power of Nutrition are all important partnerships.

Building on these efforts, in April 2016 the World Bank and UNICEF launched the Early Childhood Development Action Network (ECDAN) to provide a platform for joint advocacy, learning, measurement, and accountability (see page 93). The strength of this network is in its diversity, with major stakeholders from the public and private sectors, civil society, academia, professional associations, foundations, donor agencies and local communities.

Each stakeholder has a key role to play. Business leaders can serve as powerful advocates by convincing policymakers of the economic case for human development. Governments can provide integrated services at scale, while foundations are better placed to support innovative new ideas being tested in the field by NGOs or emerging through academic research. Private companies can drive innovation and use global partnerships to scale promising ideas across regions and around the world.

Ensuring our children receive the skills and care to develop their full potential is everyone's responsibility. Adequate investments in the early years lift economies and strengthen the fabric of our societies. Our challenge is to make sure everyone understands the strategic importance of early childhood development to build a more just and prosperous world, and ensure that no more children are left behind in a future that will no doubt surprise us all.

References

Black, M.M., Walker, S.P., Fernald, L.C.H., Andersen, C.T., DiGirolamo, A.M., Lu, C. *et al.* (2016). Early childhood development coming of age: science through the life course. *The Lancet* 389(10064): 77–90.

Engle, P.L., Fernald, L., Alderman, H., Behrman, J., O'Gara, C., Yousafzai, A. *et al.* (2011). Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries. *The Lancet* 378(9799): 1339–53.

Galasso, E., Wagstaff, A., Nadeau, S. and Shekar, M. (2017). *The Economic Costs of Stunting and How to Reduce Them*, Policy Research Note No. 5, Development Economics. Washington DC: World Bank Group.

Shekar, M., Kakietek, J.J., Dayton Eberwein, J.M. and Walters, D.D. (2016) *An Investment Framework for Nutrition: Reaching the Global Targets for Stunting, Anemia, Breastfeeding, and Wasting*. Washington DC: World Bank Group.

UNESCO. (Online). UIS.Stat. Available at: http://data.uis.unesco.org (accessed April 2017).

Victora, C.G., Adair, L., Fall, C., Hallal, P.C., Martorell, R., Richter, L. *et al.* (2008). Maternal and child undernutrition: consequences for adult health and human capital. *The Lancet* 371(9609): 340–57.

World Health Organization. (Online). *UNICEF–WHO–The World Bank: Joint Child Malnutrition Estimates: Levels and trends* (2016 edn). Global database on Child Growth and Malnutrition. Available at: http://www.who.int/nutgrowthdb/estimates/en/ (accessed April 2017).

BREAKTHROUGH IDEAS

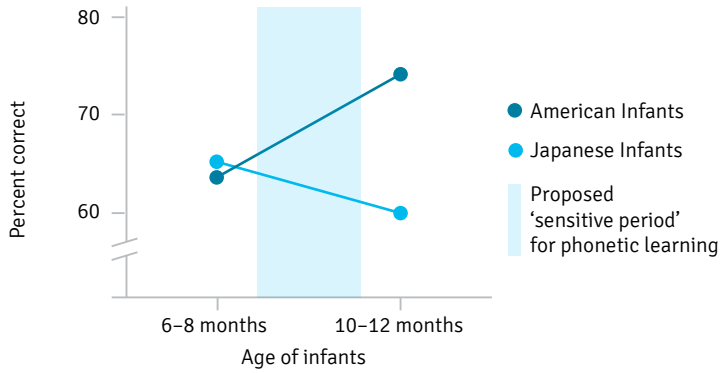
Big surprises from little brains

Patricia K. Kuhl
Professor of Speech and Hearing Sciences, Co-Director, Institute for Learning and Brain Sciences, University of Washington, Seattle WA, USA

The last decade has produced an explosion of information about the baby brain, with a growing number of researchers making valuable contributions to the field. My own laboratory's research has focused on early language acquisition, and recently I have begun to study the effects of music on the baby brain. This is showing how fundamental, seemingly unimportant experiences – like a simple game of peek-a-boo – can change broad and important areas of the brain, and enhance the skill sets that these brain areas support.

The brain grows very rapidly in the first year of life, with brain areas starting to specialise based on environmental experience. Research in my laboratory has shown that at birth, infants can detect fine acoustic differences between all of the sounds (consonants and vowels) that distinguish words in any language. They are 'citizens of the world' with regard to language. By 12 months of age, listening to parents and other caregivers produces an important change – the infant brain begins to specialise on the sounds that distinguish words in their culture, and can no longer hear the distinctions between sounds used exclusively in other languages.

For example, the Japanese language does not use the sounds 'r' and 'l', while English uses them to distinguish words such as 'rake' and 'lake'. As shown in Figure 1, both American and Japanese infants discriminate the sounds 'r' and 'l' at 6–8 months of age, But two months later, between 8 and 10 months of age, American infants – who hear these sounds from their parents – show an increase in the ability to discriminate them, whereas Japanese infants –who do not hear these sounds – show a dramatic decrease in their ability to distinguish them. This important change occurs right before the child's first birthday. It provides the first evidence that infants' brains are being shaped by hearing parents and caregivers talk to them.



◁

Figure 1 Effects of age on discrimination of the American English /ra/–/la/ phonetic contrast by American and Japanese infants at 6–8 and 10–12 months of age

Source: Kuhl (2004)

Our laboratory was one of the first groups in the world to study the baby brain using magnetoencephalography (MEG). As shown by Figure 2, the MEG machine looks like a hair dryer from Mars. It has a hood containing 306 sensors that pick up magnetic fields reflecting the firing of neurons in the baby's brain. The more neurons that are firing in synchrony, the more activity we observe. The MEG machine is totally safe and non-invasive – it measures from the outside, like a stethoscope. It is also totally silent, so we can play sounds to babies and record their brain's reactions. In the picture, a custom-made adjustable chair was used in order to adjust to the infant's height, placing the infant's head under the MEG sensor array for an optimal position during the recording.

◁

Figure 2 Infant in a MEG machine during measurement.

Photo: Patricia Kuhl, University of Washington Institute for Learning and Brain Sciences

We investigated another question: could babies learn to distinguish sounds they hear on videos as well as sounds they hear from humans? We exposed two groups of 9-month-old infants to a language that they had not heard before (Figure 3a). One group experienced 12 sessions of social play during which a foreign-language speaker read books and played with toys. The other group was exposed to the same material in the same room for the same number of sessions, but through video (Kuhl *et al.*, 2003). Then we used the MEG machine to find out if infants had learned to distinguish sounds used in the unfamiliar language.

Figure 3a Foreign-language exposure

Source: adapted from Kuhl *et al.* (2003)

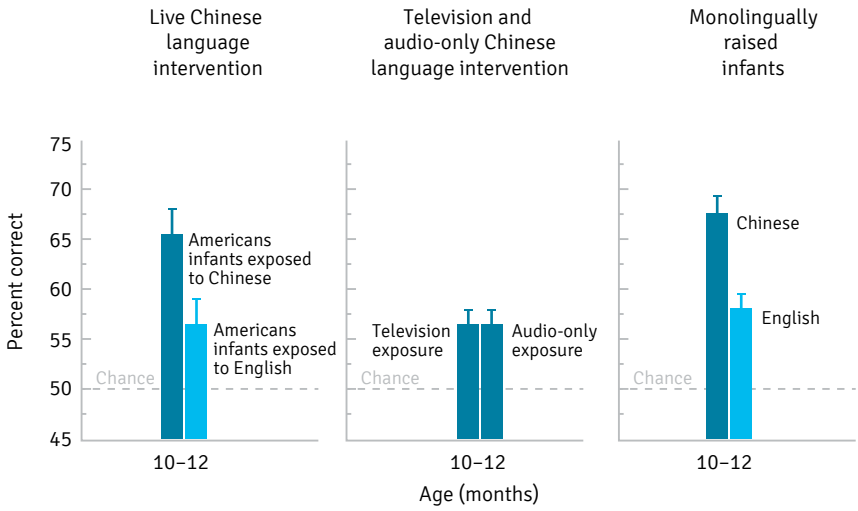


Figure 3b Mandarin Chinese phonetic discrimination

Source: adapted from Kuhl *et al.* (2003)

As shown in Figure 3b, the infants who watched the videos learned nothing. Even though they stared intently at the screen during the sessions, they had no more ability to discriminate sounds than a control group of infants who heard English during the same kinds of language play sessions. But learning was incredibly strong among the infants who heard the foreign language from a human being who was interacting with them socially. After just 12 sessions, their ability to distinguish sounds was statistically equivalent to infants in the foreign country who have been listening to the language for 10.5 months.

'The baby brain "expects" language, and expects it in social settings. When that happens, learning is extraordinary.'

This finding was a surprise because, at the time, scientists did not consider social interactions during day-to-day moments very important. Social interaction was considered vital for a child's social and emotional development, but the idea that infants' social interactions with caregivers could promote cognitive development had not been widely accepted.

The baby brain on music

At 'critical periods' in development, the brain is set to 'expect' input from the environment. Baby brains are what we call 'experience-expectant'. When the environment supplies the right kind of input at the critical time, brain networks are formed based on that input. Between 6 and 12 months of age, the baby brain 'expects' language, and expects it in social settings. When that happens, learning is extraordinary. Our studies have shown that engaging a young infant in verbal exchanges activates not only the auditory areas in the brain, but also those areas that infants use when they socially engage and talk back to us – setting up a kind of serve-and-volley response between the parent and child.

Recently a doctoral student in my laboratory, Christina Zhao, became interested in the effects of music on the baby brain. Christina is a concert pianist, and wondered whether music experiences in social playgroups would promote cognitive development in infants. She, being a musician, thought that something much more than just training the auditory system to detect musical notes would take place.

Together we designed an experiment that mimicked those I had conducted on infants' language learning. Infants took part in 12 sessions of social play between 9 and 10 months of age, the period when their brains are learning the sounds of language. But instead of hearing a novel language, they were exposed to a specific musical rhythm – the waltz in many forms, from *Blue Danube* to *Take Me Out to the Ballgame*. The study incorporated features that we knew to be critical for infant learning: the experience was social, the sensory stimulation was highly variable, and infants and their parents reacted to the tempo of the music – parents helped infants tap their feet or their hands, or used little mallets and drums to keep time with the rhythm (Zhao and Kuhl, 2016).

Infants were randomly assigned to the music intervention versus a control group of infants at the same age. Control children were also gathered in social groups with their parents for 12 sessions in which they also played with things like drums, using mallets, but they experienced no rhythm, and heard no music being played. After the 12 sessions, infants in both groups were tested in the MEG machine: we played a new waltz, and occasionally we mistimed the rhythm by delaying the expected note by a fraction of a second to see if their brains would react.

We expected that infants in the music group would show greater neural activity in the auditory areas of the brain than infants in the control group, but – to our surprise – infants in the music group also demonstrated much greater neural firing in the pre-frontal cortex, where attention is controlled and patterns are detected. This means that the intervention affected a broader, and higher-level, brain area that assists infants in predicting patterns in the environment.

We wondered if our music intervention had improved the infants' ability to detect other patterns, beyond music. So we further tested them using a language that was foreign to them, Japanese: we created a mistimed syllable to test if infants would perceive that error in the rhythm of speech. Infants in the music group did indeed show greater brain activity both in auditory areas and in the pre-frontal cortex: the experience of keeping time to the rhythm of the waltz had improved their ability to recognise patterns in a foreign language, too.

'We believe that infants' brains are strengthened in areas that support pattern detection based on the simplest of routines.'

The results suggest that when infants experience patterned auditory, visual, or haptic stimulation, it does not simply train their sensory end organs – their ears, eyes, or their skin – it also helps establish the ability to detect and predict patterns in the world.

Why pattern detection is important

We live in a world in which no one knows exactly what to expect next. But your life is calmer, and you reserve brain resources for creativity, if you can predict what's coming next. When you know the route to drive to work, the location of the grocery store, and where the bank is located, your mind is freed up to think about something more exciting, new and creative.

When infants learn patterns and routines, it also frees their minds for more creative work. We believe that infants' brains are strengthened in areas that support pattern detection based on the simplest of routines: when we play music and bounce infants to the rhythm, or play games like peek-a-boo, we repeat the patterns over and over again. Babies know that they're going to get the 'boo' at the end, and they delight in the routine because they can predict it. Infants who experience these kinds of activities expect the world to be rational, and they begin to seek patterns in the world, and this is very helpful.

We can also imagine the opposite situation – a child in a world that is not always rational. Some children's worlds are totally chaotic. Toxic stress is real: children can experience abuse, or be neglected, and their homes are completely chaotic. They do not experience routine playful patterns that safely predict what is coming next. They do not have caregivers that act in a predictable way around eating, playing, and bathing – ordinary activities that build a sense of safety and trust. Perhaps all these children can predict is that, at some random time, they may be treated badly or find themselves alone. This is a completely different world for the child. We would expect a very different pattern of brain development in the neglected child.

Early experience is potent because it provides patterns. We believe that these patterns affect the baby brain's architecture, and that this early brain development profoundly affects the child's future brain growth and skills.

References

Kuhl, P.K. (2004). Early language acquisition: cracking the speech code. *Nature Reviews Neuroscience* 5: 831–43.

Kuhl, P.K., Tsao, F -M. and Liu, H.-M. (2003). Foreign-language experience in infancy: effects of short-term exposure and social interaction on phonetic learning. *Proceedings of the National Academy of Sciences, USA* 100: 9096–101.

Zhao, T.C and Kuhl, P.K. (2016). Musical intervention enhances infants' neural processing of temporal structure in music and speech. *Proceedings of the National Academy of Sciences, USA* 113: 5212–17.

The Global Journalism Institute on Early Childhood and the Developing Brain

Karen Brown
ECD Institute Consultant, The Dart Center for Journalism and Trauma, Columbia University, New York, NY, USA

When the organisers of the Global Journalism Institute on Early Childhood and the Developing Brain first put out the call for applicants, they assumed the appeal would be somewhat narrow. After all, how many journalists – so often on daily deadlines – would be willing to take almost a week out of their working lives to explore neuroscience, international policy, advocacy, and the craft of reporting on children and the brain?

As it turned out, 480 journalists from 96 countries applied to attend the institute, which took place at Columbia University in New York City and was organised by the Dart Center for Journalism and Trauma. Of them, 45 journalists from 26 countries were selected to spend four days in the sunny, capacious World Room at Columbia University's School of Journalism, learning and sharing stories about the vulnerability and potential of early childhood.

'From the applications, it was clear that for reporters across an astonishing range of beats – from local education to global refugee and migration crises – few issues are as pertinent as child development and the impact of violence and trauma on young minds' said Bruce Shapiro, Executive Director of the Dart Center. 'Journalists know they are the capillary system for public understanding of early childhood development. Yet so few are grounded in the basic science or have the opportunity to talk with colleagues about innovative ways of telling these important stories.'

This deep-dive into early childhood development began with a casual conversation. Shapiro was chatting with Jack Rosenthal, former president of the New York Times Company Foundation and long-time editor of the paper's editorial page. Rosenthal had been thinking about new research into early brain science, the importance of the first few years of life, and the challenges facing so many of the world's vulnerable children. He also knew that UNICEF had a keen interest in this kind of training. Rosenthal – who has helped organise dozens of journalism topic institutes over the years – put the two organisations together. Several other funders came on board – the Bernard van Leer Foundation, the Ford Foundation, the Jacobs Foundation and the Maria Cecilia Souto Vidigal Foundation.

△ *Photo: Ariel Ritchin/Dart Center*

A variety of perspectives

The Dart Center set about identifying experts in disciplines related to early childhood, making sure that they approached the most common questions from a variety of perspectives, and that these experts would be able to communicate easily with journalists.[1] The final programme included an introduction to early childhood followed by a day on science, a day on policy, and a day on the craft of reporting on these issues for a wide range of print, broadcast, and online outlets. The topics covered included:

- evidence on how poverty and 'toxic stress' affect the architecture of the developing brain
- how neuroscience helped move early childhood up the priority list of international aid agencies
- how the field of epigenetics is shedding light on the ways negative and positive experiences in childhood can change gene expression
- the common components of resilience in children – from refugees to abuse survivors – and the role of societal systems, family connections, and the community in supporting it
- the economic argument for investing in early childhood
- small-scale programmes for vulnerable children, such as one in Jordan that encourages reading and another in East Africa on non-violent parenting
- the surprising ways in which technology interacts with the developing brain.

1 Featured speakers included Jack P. Shonkoff, Director of Harvard's Center on the Developing Child; Maureen Black, Professor in Pediatrics at the University of Maryland School of Medicine; Flávio Cunha, Associate Professor of Economics at Rice University; James F. Leckman, Professor of Child Psychiatry, Psychiatry, Psychology and Pediatrics at Yale University; Nat Kendall-Taylor, Chief Executive Officer of The FrameWorks Institute; Ann S. Masten, Professor of Child Development at the University of Minnesota; Kimberly Noble, Associate Professor of Neuroscience and Education at Teachers College, Columbia University; Carina Vance, Executive Director of the South American Institute of Governance in Health, Union of South American Nations (UNASUR); and Katie McLaughlin, Associate Professor of Psychology and Director of the Stress and Development Lab, University of Washington.

There were some fiery moments – after all, this was a roomful of journalists. For example, when an international policy director put out a 'call to action' urging the reporters to work alongside agencies in furthering the goals of early childhood programmes, several participants made clear that journalists are independent actors who should deliver information, not partner with the agencies they report on.

Or when one presenter explained the best way to 'frame' messages on childhood welfare policies in order to sway the largest number of people (for example, how to get people to stop blaming parents), some journalists took issue with the assumption that they should advocate any particular message at all.

'This institute was an unusual attempt to build bridges between news professionals, early childhood scientists and policy advocates', the Dart Center's Bruce Shapiro said. 'Too often, well-intentioned advocates forget that journalists' credibility depends upon our independence. We can be crusaders through investigation and storytelling. But we can't be propagandists. So the focus of this Global Reporting Institute wasn't really on "messages", it was on giving reporters a baseline level of knowledge, forging relationships with experts who can be sources and advisers, and finding fresh ways of telling these vitally important stories.'

What did journalists take home to their newsrooms, their home offices (many were freelance writers), and the divergent realities of their 26 countries?

'Journalists know they are the capillary system for public understanding of early childhood development.'

Story ideas, for one, in the form of emerging science and debates over the funding, efficacy, politics and timing of child-related policies. Daily break-out sessions enabled the journalists to brainstorm ways to individualise stories for each audience – from the trauma of the Zika and Ebola outbreaks in Brazil and Sierra Leone, to a childcare crisis in Chile, to the stark economic inequality in the USA.

Perhaps more importantly, the journalists who attended said they came away with more context and background to inform future stories – and an understanding that programmes meant to help vulnerable children and their parents should be science-based, recognise the plasticity of the young brain, and tap into local sources of resilience. The hope is that the institute will encourage more nuance and context in worldwide media coverage of early childhood development.

Early learning and nurturing care for children displaced by conflict and persecution

Nada Elattar
Director, Educational Programs, International Social Impact, Sesame Workshop, New York, USA

Katie Maeve Murphy
Senior Technical Advisor, Early Childhood Development, International Rescue Committee, New York, USA

Sesame Workshop and the International Rescue Committee (IRC) are embarking on a multi-year intervention to bring early learning and nurturing care to children and families affected by the civil war in Syria, with the aim of developing a framework that can be used in other humanitarian situations. The six-year-long conflict in Syria has caused massive displacement, exposing children to violence and preventing early learning opportunities that are critical to their well-being.

Across the globe, the scale of today's refugee crisis is staggering – right now, 65 million people are displaced, and over half of all refugees are aged under 18 (UNHCR, online). The daily effects of violence and neglect put these children at high risk of experiencing 'toxic stress', a disruption of the normal neurological and biological processes critical to brain development that can lead to lifelong impairments including poor physical and mental health and cognitive deficits leading to reduced economic earnings (Britto *et al.*, 2016). Given the number of children affected, the ultimate impacts on society will be large.

Children are remarkably resilient – the damage they have suffered can be reversed, if we reach them early (Britto *et al.*, 2016). Despite the robust evidence pointing to the need to safeguard early childhood development in crisis contexts, however, the humanitarian system often maintains a narrow focus on survival, focusing on basic needs such as food and shelter and neglecting other critical areas: on average, for example, less than 2% of humanitarian response funding goes to education and just a small fraction of that is dedicated to early childhood interventions (UNESCO, 2015). Many children spend their entire school careers in refugee settings – refugees today are displaced for an average of 17 years, or 23 years for those internally displaced. Starting early, with interventions that promote school readiness, is critical to their chances of getting a good education.

There is therefore a great need for a bold new approach to early childhood development in refugee situations – one that is operationally feasible with existing systems, is long-term, durable, and has the potential to scale and replicate. This partnership between the non-profit Sesame Workshop and the IRC brings together the power of the former's proven educational content and the latter's expertise in working with children and families in conflict settings. With over 80 years' experience of responding to the world's worst humanitarian crises, the IRC has made a difference to 23 million people across 40 countries.

Sesame, meanwhile, has almost 50 years' experience, across 150 countries, of creating research-based educational content tailored to children's specific needs, with *Sesame Street*'s Muppets imparting both simple and difficult lessons, always from a child's perspective. Content created through Sesame Workshop's international initiatives has been shown to have a positive impact on children's cognitive skills, learning about the world, and social reasoning and attitudes, while children's exposure to Sesame Workshop content is correlated with knowing more about topics covered in the show (Mares *et al*., 2015).

Programming and multimedia content

Working together, Sesame Workshop and the IRC aim to deliver a life-changing experience for millions of Syrian, Jordanian, Iraqi, and Lebanese children, from birth to age 8, that will transform their language, early reading, maths, and social–emotional skills. The intervention will address the specific needs of these children through programming and multimedia content:

- new broadcast television shows with inspiring Muppet role models, tailored to reflect the unique experiences of refugee children with an emphasis on early learning and mutual respect and understanding within displaced communities, and between displaced and host communities
- materials that support parents and caregivers in promoting nurturing care, healthy development and deepening learning experiences materials to promote early learning in formal and non-formal education and childcare centres
- training resources for service providers working with young children and their caregivers.

△ *Photo: Sesame Workshop/Ryan Heffernan*

The intervention aims to be intense enough to be life-changing, but cost-effective enough to be scalable. It will create an evergreen library of global content to be disseminated through the IRC's existing partner networks, including schools, community centres, social protection programmes and health centres. It will disseminate content widely via mobile, broadcast, and print media, and leverage the wider network of service providers supporting refugee communities in the Syrian response region. It will reach families where they are, with content that addresses children's immediate needs and builds a strong foundation for their future well-being. Once the model has been tested, it would be open for others to implement in order to scale beyond IRC's current working areas.

'Children are remarkably resilient – the damage they have suffered can be reversed, if we reach them early.'

Formative research and initial testing of existing Arabic-language Sesame content, working with the IRC team in Jordan, has been funded by the Bernard van Leer Foundation and the Open Society Foundation. The initiative is also one of eight semi-finalists for the MacArthur Foundation's '100&Change' grant (MacArthur Foundation, online). The pilot phase will allow us in the IRC and the Sesame Workshop to create an educational framework that focuses on the needs of young children and caregivers affected by displacement and will also help to inform a broader regional initiative as we move forward. Beyond the pilot phase, our approach and the research we generate as part of the larger initiative will inform and reshape services being offered in the wider humanitarian system.

Research topics will include, for example, how young children and families respond to and engage with the content and materials, which delivery platforms are most effective, and how behaviour change and learning outcomes are impacted by multimedia materials in these settings. We will invest heavily in impact evaluation by integrating a randomised controlled trial in the implementation phase. This trial will assess the intervention's impact on physical development, literacy and numeracy knowledge, and social-emotional skills. The research we gather will help inform a blueprint for working in future humanitarian crises – creating a framework that can be replicated in other contexts, for generations to come.

Further details

More information is available at: sesameworkshop.org/refugees

References

Britto, P.R., Lye, S.J., Proulx, K., Yousafzai, A.K., Matthews, S.G., Vaivada, T., Perez-Escamilla, R. *et al.* (2016). Nurturing care: promoting early childhood development. *The Lancet* 389(10064): 91–102. Available at: http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)31390-3/abstract (accessed May 2017).

MacArthur Foundation. (online). 100&Change. Available at: https://www.macfound.org/programs/100change/ (accessed May 2017).

Mares, M.L., Sivakumar, G. and Stephenson, L. (2015). From meta to micro: examining the effectiveness of educational TV. *American Behavioral Scientist* 59(14): 1822–46.

UNESCO. (2015) *EFA Global Monitoring Report 2015: Humanitarian Aid for Education – Why it Matters and Why More is Needed*, Policy Paper 2. Paris: UNESCO. Available at: http://s3.amazonaws.com/inee-assets/resources/EFA_GMR_-_Humanitarian_Aid_for_Education__Policy_Paper__June_2015.pdf (accessed May 2017).

UNHCR. (online). Facts and Figures about Refugees. Available at: http://www.unhcr.org/uk/figures-at-a-glance.html (accessed May 2017).

Public–private partnership for early childhood: a chance to improve Romania's competitiveness

Carmen Lica
Executive Director, Step by Step Center for Education and Professional Development, Bucharest, Romania

In May 2016, over 120 business leaders, government officials and representatives of the media and international partners met in Bucharest for a one-day international conference entitled Public–Private Partnership for Early Childhood: A Chance to Improve Romania's Competitiveness.[1] The high level of participation among Romania's business community showed that the economic case for investing in young children is resonating: that the level of investment in today's young children influences the quality of the current workforce, the future workforce and the future customer base. An investment in young children is an investment in Romania's future competitiveness.

The conference was part of a programme begun a few months earlier, at the beginning of 2016, to identify and convene Romanian business champions for young children. It was initiated by the Step by Step Center for Education and Professional Development (CEDP), which promotes democratic principles in education and child protection in Romania, in partnership with the International Step by Step Association, an early childhood-focused platform organisation with members in over 40 European and Asian states. With financial support from OSF-ECP (the Open Society Foundations Early Childhood Program), we worked with expert consultants from ReadyNation, which for several years has successfully involved business leaders in the USA in investing in and advocating for programmes for young children.

Conversations with ReadyNation helped us to understand the best ways to engage business leaders by emphasising how investments in early childhood can improve future national competitiveness and the environment for doing business. As the technologies of the 'fourth industrial revolution' change many working environments at an increasingly rapid pace, the business community is keen to recruit employees with 'core work-related skills' such as creativity, cognitive flexibility, reading comprehension, technological literacy, emotional intelligence, negotiation, decision making, critical thinking, active listening, complex problem solving and data analysis (World Economic Forum, 2016).

Approaching business people was an adventure. We learned that making one enthusiastic, high-level connection can help to open doors to others in the business community. In our case the key figure was Radu Enache, former Country Director of Hewlett Packard, who immediately grasped the importance and magnitude of the issue and joined the initiative on a volunteer basis.

1 The conference was organised by the Center for Education and Professional Development (CEPD) in partnership with the Ministry of Education, UNICEF, ISSA and ReadyNation, and with financial support from OSF-ECP. A special guest from Jacobs Foundation also participated.

△ *Photo: Courtesy Paul Buciuta*

At the conference, international experts in economics and child development made the case for investing early. Members of the business community and media representatives discussed what difference early investment can make in the life of a child, and how a higher-quality system of early childhood education and care in Romania could translate into real economic benefits. The conference yielded immediate results: several new business leaders made contact to join the initiative; and Gabriel Biris, then State Secretary in the Ministry of Finance, proposed new measures to support businesses to offer better services to their employees with young children.

A necessary boost for early childhood

In Romania, early childhood has generally not been a high priority on the public policy agenda. In 1990, at the end of the Communist regime, Romania had close to 1000 distinct programmes offering services to children up to 3 years old; by 2016, that had dwindled to around 300, serving mostly urban populations. Nationally, the percentage of children in this age group who are enrolled in early childhood education and care services is very low.

There was a promising development in 2011, when legislation was passed that for the first time mentioned that 'education starts at birth' (Law no.1/2011). Unfortunately, however, the will to translate this legislation into tangible changes in policy and practice was confined to professionals in early childhood who have very little influence at policy level. Recent years have seen increasing enrolment in preschool education, but there has been very little discussion about the quality of these expanding services – which is what really makes the difference, especially to children coming from vulnerable groups.

There is widespread concern in Romania about educational outcomes among older children. For example, 42% of the country's 15 year olds are reported to be functionally illiterate (Organisation for Economic Cooperation and Development, 2015), and the school dropout rate reached as high as 18.4% in 2010 – with a significantly higher rate in rural than in urban areas (Ministerul Educației Naționale, 2014). But in public debate the link is not generally made between these educational outcomes and the lack of quality services for young children and their families.

Can the attention of the business community focus the attention of the public and policymakers on the need for greater investment in early childhood services? The early signs are promising. After a year of outreach to the business community, CEDP can count on more than 20 active and high-profile supporters, who have exposed hundreds more business leaders to the topic. We are discussing partnerships with business organisations including Am Cham and the Romanian Business Leaders and Bankers Association.

Still, a lot of work remains to be done. It takes time to organise meetings and make plans for advocacy and supporting the media to explain the relationship between early childhood investments and the future skills of the workforce and competitiveness of the national economy. We continue to work to improve understanding and encourage business champions to bring more of their peers on board.

References

Ministerul Educației Naționale. (2014). *Romanian Education For All Review Report*. Bucharest: UNESCO. Available at: http://unesdoc.unesco.org/images/0023/002303/230309e.pdf (accessed April 2017).

Organisation for Economic Cooperation and Development. (2015). Programme for International Student Assessment (PISA) 2015 Results. Available at: http://www.oecd.org/pisa/ (accessed April 2017).

World Economic Forum. (2016). *The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution*. Geneva: World Economic Forum. Available at: http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf (accessed April 2017).

The Kids in Communities Study: what is it about where you live that makes a difference to children's development?

Sharon Goldfeld
Professor, Department of Paediatrics, University of Melbourne and Deputy Director, Centre for Community Child Health, Royal Children's Hospital, Melbourne, Australia

Karen Villanueva
Research Fellow, Murdoch Children's Research Institute, Melbourne, Australia

To date, research in early child development has focused primarily on family and school environments. However, to create positive environments that facilitate optimal development in young children we need to better understand the contribution of all the environments in which they grow and develop. Yet there has been a relative lack of rigorous studies investigating community-level effects, also known as neighbourhood effects research, on child development. The Kids in Communities Study (KiCS) hopes to contribute to this field of research by identifying which factors might influence children's development (Goldfeld *et al.*, 2015).

Globally, over 50% of people live in urban environments (United Nations Department of Economic and Social Affairs, 2014), providing an important setting in which children grow and develop. In response to rapidly growing populations, policy agendas advocate the need for 'child-friendly' and 'liveable' cities, which seek to promote and protect child well-being (UNICEF Australia, online). Yet there is limited guidance and evidence to support what is 'child-friendly' for young children.

One thing we know from existing evidence is that socioeconomic disadvantage is a key problem: research shows that in disadvantaged communities, lack of resources and opportunities can result in worse child development outcomes that can persist from one generation to the next (Gupta *et al.*, 2007). Studies also point towards some factors that promote positive child development: involved parents and families, active community organisations, and neighbourhoods that are safe to walk in with good places to play may all help, even in lower-income communities (Zubrick *et al.*, 2005; Engle *et al.*, 2011; Ward *et al.*, 2016).

But we need to understand much more about how community-level factors impact child development and, most importantly, which factors might be modifiable. This knowledge is essential if we are to develop more effective policies and programmes that can improve child development outcomes in all communities. More specifically, we can inform public policy such as urban design and planning, public health policies, and child health service policies. The increasing policy interest in 'place-based' interventions suggests it is timely to have evidence that supports children's health and development at the community level.

The Kids in Communities Study

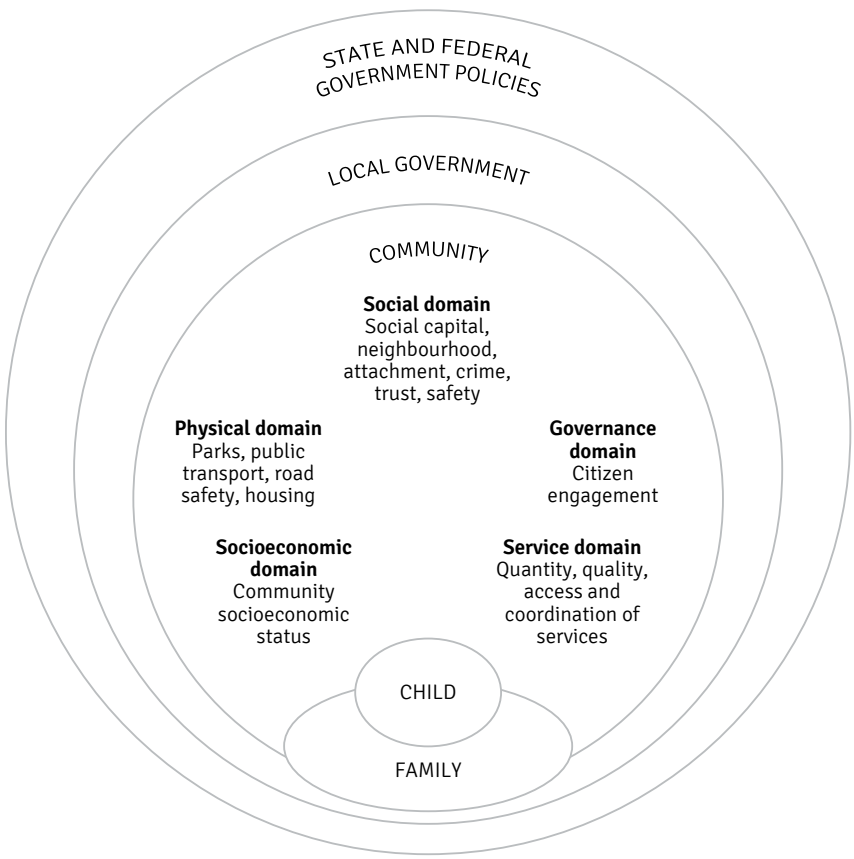
The Kids in Communities Study, currently being conducted in Australia, tries to answer the question: 'Can communities make a difference to young children's development?' (Goldfeld *et al.*, 2015). This will enable the development of indicators and measures which can be used by communities, policymakers, and other stakeholders to develop policies and programmes that aim to improve child development in their communities.

KiCS is based on an ecological view of child development, which means that it focuses on the many factors working at different levels of society, including the child's family, the community, and local, state and federal government policies. The study uses an innovative multi-method quantitative and qualitative approach (Goldfeld *et al.*, 2017) to measure factors within five separate (but related) community domains: socioeconomic, physical, service, social and governance environments.

▷

Figure 1 The Kids in Communities Study conceptual framework

Source: Goldfeld *et al.*, 2015



Socioeconomic environment
The strongest evidence supporting relationships between community and early childhood development are neighbourhood dis-/advantage markers such as affluence, poverty, residential stability, and education (Bradley and Corwyn, 2002). Combined with demographic considerations such as minority groups and ethnicity, this domain concentrates on the socio-demographic environment of communities, which can have potential impacts for children across key developmental domains, such as physical health and well-being, and social and emotional competence.

'The social environments in which children grow, develop and learn to interact have a potentially large bearing upon their developmental outcomes.'

Physical environment
KiCS has focused on the built environment, 'part of the physical environment that is constructed by human activity' (Saelens and Handy, 2008). The built environment includes housing, road safety, public transport, and availability and proximity to features such as parks, social infrastructure (for example, schools and childcare), and other spaces and places where children play and interact with others (Villanueva *et al.*, 2016).

Service environment
Service provision includes factors such as quantity, quality, access, and coordination of services (Sampson *et al.*, 2002). This domain concentrates on what is actually provided at the community level, and also provides for tangible policy solutions. The focus of KiCS is on services that are usually delivered locally and cater for families and early childhood (for example, primary schools, childcare, general practitioners).

Greater understanding of the physical and service domain influences can be used by researchers, practitioners, service providers, families and communities to start thinking about how they may manipulate the built environment and service sector to encourage better developmental outcomes for children.

Social environment
Ecological theory highlights the role of social environmental influences, and includes factors such as social capital, social ties and community cohesion, perceived crime and safety, neighbourhood attachment and perceived child-friendliness. There is some overlap with the physical and service domains, which is not surprising. The social environments in which children grow, develop, and learn to interact have a potentially large bearing upon their developmental outcomes (Goldfeld *et al.*, 2015).

Governance environment
The governance domain includes citizen engagement and civic participation, local policies on early childhood development, key local leaders, and early childhood partnerships. Broader governance and leadership may be facilitated by more local 'leaders' (such as local government), as well as local service providers and stakeholders who work on early childhood development

roundtables, or who lobby for investment and change. Although little evidence exists to clearly tie governance to improved outcomes for children, it is apparent that governance structures can play a key role in driving change at a local level (O'Toole, 2003).

Conclusion

Reducing developmental vulnerability in children, and setting optimal early childhood developmental trajectories is a worthy policy goal. A good start to life is essential (Chan, 2013). Early childhood is a time when environments can critically influence how the brain develops (Hertzman, 2004). Children with stimulating and positive environments early in life (from birth to 8 years) have optimal foundations for their ongoing physical, social, emotional, and cognitive development (Heckman, 2006).

△ *Photo: © iStock.com/FatCamera*

With previous research focusing on child, family, and school factors, it is timely to consider community-level environments as an important mechanism for improving developmental outcomes. If we can understand what it is about where children live that might positively influence development then we can think about how best to guide investments that promote positive early childhood development. Research such as KiCS offers potentially modifiable action points for impact.

References

Bradley, R.H. and Corwyn, R.F. (2002). Socioeconomic status and child development. *Annual Review of Psychology* 53: 371–99.

Chan, M. (2013). Linking child survival and child development for health, equity, and sustainable development. *The Lancet* 381: 1514.

Engle, P.L., Fernald, L.C.H., Alderman, H., Behrman, J., O'Gara, C., Yousafzai, A. *et al.* (2011). Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries. *The Lancet* 378: 1339–53.

Goldfeld, S., Villanueva, K., Tanton, R., Katz, I., Brinkman, S., Woolcock, G. and Giles-Corti, B. (2017). Kids In Communities Study (KiCS) study protocol: a cross-sectional mixed-methods approach to measuring community-level factors influencing early child development in Australia. *BMJ Open* 7: E014047.

Goldfeld, S., Woolcock, G., Katz, I., Tanton, R., Brinkman, S., O'Connor *et al.* (2015). Neighbourhood effects influencing early childhood development: conceptual model and trial measurement methodologies from the Kids In Communities Study. *Social Indicators Research* 120: 197–212.

Gupta, R.-S., De Wit, M. and McKeown, D. (2007). The impact of poverty on the current and future health status of children. *Paediatrics and Child Health* 12(8): 667–72.

Heckman, J.J. (2006). Skill formation and the economics of investing in disadvantaged children. *Science* 312: 1900–02.

Hertzman, C. (2004). *Making Early Childhood Development a Priority: Lessons from Vancouver*. Vancouver: Canadian Centre For Policy Alternatives.

O'Toole, K. (2003). Exploring community governance in Victorian local government. *Proceedings of the 51st Annual Conference of the Australasian Political Studies Association*: 1–13.

Saelens, B.E. and Handy, S.L. (2008). Built environment correlates of walking: a review. *Medicine and Science in Sports and Exercise* 40: S550.

Sampson, R.J., Morenoff, J.D. and Gannon-Rowley, T. (2002). Assessing 'neighborhood effects': social processes and new directions in research. *Annual Review Of Sociology* 28: 443–78.

UNICEF Australia. (online). Child Friendly Cities and Communities. Available at: https://www.unicef.org.au/our-work/unicef-in-australia/communities (accessed April 2017).

United Nations Department of Economic and Social Affairs. (2014). *World Urbanization Prospects: 2014 Revision*. New York: United Nations Publications.

Villanueva, K., Badland, H., Kvalsvig, A., O'Connor, M., Christian, H., Woolcock, G. *et al.* (2016). Can the neighborhood built environment make a difference in children's development? Building the research agenda to create evidence for place-based children's policy. *Academic Pediatrics* 16: 10–19.

Ward, J.S., Duncan, J.S., Jarden, A. and Stewart, T. (2016). The impact of children's exposure to greenspace on physical activity, cognitive development, emotional wellbeing, and ability to appraise risk. *Health & Place* 40: 44–50.

Zubrick, S.R., Silburn, S.R. and Prior, M. (2005). Resources and contexts for child development: implications for children and society. In Richardson, S.R. and Prior, M. (eds) *No Time to Lose: The Wellbeing of Australia's Children*. Melbourne: Melbourne University Publishing.

Mothers of Rotterdam: a new medical and social support programme for vulnerable pregnant women

Johanna P. de Graaf
Project Leader

Marijke W. de Groot
PhD student

Marije van der Hulst
PhD student

Loes C.M. Bertens
Epidemiologist

Eric A.P. Steegers
Head of Department, Department of Obstetrics and Gynaecology, Division of Obstetrics and Prenatal Medicine, Erasmus MC, University Medical Centre, Rotterdam, Netherlands

The global economic downturn that started in 2008 took its toll on European societies, with pressure on public finances leading to the weakening of social security systems (Reinhart and Rogoff, 2009; Stuckler *et al.*, 2009; Keeley and Love, 2010). In the Netherlands, cuts in state care services were presented politically as part of a transition towards a 'participation society', but in practice have increased isolation of some highly vulnerable groups. Midwives and obstetricians in Rotterdam, the country's second-largest city – which is highly multicultural – noted an increase in the number of pregnant women with complex psychosocial as well as medical problems, such as homelessness, poverty, domestic violence, substance abuse, sexual abuse and mental health issues.

Often these problems are combined with very limited opportunities for self-care and self-direction, decreased sense of empowerment and much mistrust in the care system. Based on a large number of international studies it can also be concluded that these highly vulnerable pregnant women have an increased risk – mostly poverty-related – of prematurity, foetal growth restriction, a suboptimal start for the child at birth and inadequate implementation of the parental role by the mother (Barker, 2007; Heijmans *et al.*, 2008; van den Berg *et al.*, 2009; Henrichs *et al.*, 2010; Poeran *et al.*, 2011; Seng *et al.*, 2011; Timmermans *et al.*, 2011; de Graaf *et al.*, 2013; Quispel *et al.*, 2012).

This situation calls for an integrated chain of antenatal care, crossing medical and social care domains and crossing the generations – not only aiming to improve the children's life chances, but to address the multi-dimensional problems in the lives of their mothers. In 2014 the innovative *Bureau Frontlijn* ('Frontline' office) of the municipality of Rotterdam therefore developed the *Moeders van Rotterdam* (Mothers of Rotterdam, MoR), together with the Erasmus Medical Centre and with the support of the Verre Bergen Foundation. The MoR programme aims to provide care to highly vulnerable pregnant women up to their child's second birthday, increasing the chances of a healthy and safe pregnancy and postpartum period that can give the child a good start in life.

Mothers who have worked with their MoR coaches to improve their situation include Saana Maoud, who has struggled to get to grips with the language and legal system in the Netherlands since fleeing from Syria with her husband and two children; Jennifer Boateng, originally from Ghana, whose MoR coach helped

her to find a place to live and a place in school for her 6-year-old son and to restructure her debts; and Loes Assinck, who along with her partner has worked hard with her coaches to overcome drug-related issues and establish healthier eating and sleeping patterns.

The MoR programme connects the social and medical domains. It is divided into three main phases:

1 resolving the acute crisis situation, by taking control
2 creating the circumstances for a safe mother–child attachment, and
3 stimulating the mother's parenting skills, appropriate to the child's developmental phase, and improving the mother's autonomy to participate actively in society.

Beyond problems in the social domain, MoR pays attention to medical risks: care providers promote a healthy lifestyle and regular visits to the community midwifery professionals during pregnancy, as well as visits to a general practitioner or obstetrician when medical complaints occur, and regular visits to the preventive healthcare centres which exist to monitor children's health and development.

△ *Photo: Erik Godijn/Moeders van Rotterdam*

The intensity of MoR is initially high, with two home visits a week, decreasing over time to one home visit every two weeks. Care is provided by a team of social service professionals and third-year students in pedagogics and welfare from the University of Applied Sciences. Deploying these interns, with appropriate supervision by professionals, reduces the costs of the programme. It could also help to build trust between mother and care provider, as the mothers may perceive interns as less threatening than more senior medical professionals.

The MoR programme's theory of change

- If we combine medical and social risk assessment during early pregnancy, then we can identify the most vulnerable women and children at risk.
- If we ensure close cooperation between medical and social care, then we can provide holistic and more effective care.
- If we provide personalised care intensively, then we can reduce stress, improve life and parenting skills and increase self-sufficiency.
- If we reduce stress and women become self-sufficient, then we improve the likelihood of a healthy newborn, safe bonding and optimal child development.
- If children are born healthy and develop optimally, then this will increase the likelihood of them leading happy and healthy lives.
- If women become self-sufficient and we increase the likelihood of children's healthy development, then we save government expenditure and increase tax revenue.

'The MoR programme aims to provide care to highly vulnerable pregnant women up to their child's second birthday.'

In 2016, a four-year prospective cohort study began, which will compare the effects of the MoR programme with the municipality of Rotterdam's normal social care programme on self-sufficiency, as judged by: the caregiver; the mother's mental health, measured through questionnaires on depression, fear and stress completed by the mother herself; and child development at 1 year of age, as measured by an 'age and stage' questionnaire.

In the meantime, the Mothers of Rotterdam programme is generating interest from across the Netherlands in the potential for the approach to be scaled up and replicated elsewhere. The Bernard van Leer Foundation came on board as a scaling partner, and the ultimate aim is to use the Rotterdam initiative to develop an evidence-based intervention that can be integrated into the existing work methods of local municipal service providers and expand this model to other cities in the Netherlands.

References

Barker, D.J. (2007). The origins of the developmental origins theory. *Journal of Internal Medicine*, May (261): 412–7.

de Graaf, J.P., Ravelli, A.C.J., Wildschut, H.I.J., Denktas, S., Voorham, A.J.J., Bonsel, G.J. and Steegers, E.A.P. (2013).Living in deprived urban districts increases perinatal health inequalities. *Journal of Maternal–Fetal and Neonatal Medicine* 26: 473–81.

Heijmans, B.T., Tobi, E.W., Stein, A.D., Putter, J., Blauw, G.J., Susser, E.S. *et al.* (2008). Persistent epigenetic differences associated with prenatal exposure to famine in humans. *Proceedings of the National Academy of Sciences of the USA* 105: 17046–9.

Henrichs, J., Schenk, J.J., Roza, S.J., van den Berg, M.P., Schmidt, H.G., Steegers, E.A. *et al.* (2010). Maternal psychological distress and fetal growth trajectories: the Generation R Study. *Psychological Medicine* 40: 633–43.

Keeley, B. and Love, P. (2010). *From Crisis to Recovery: The causes, course and consequences of the Great Recession.* Paris: OECD.

Poeran, J., Denktaş, S., Birnie, E., Bonsel, G.J. and Steegers, E.A.P. (2011). Urban perinatal health inequalities. *Journal of Maternal–Fetal and Neonatal Medicine* 24: 643–46.

Quispel, C., Schneider, A.J., Bonsel, G.J. and Lambregtse-van den Berg, M.P. (2012). An innovative screen-and-advice model for psychopathology and psychosocial problems among urban pregnant women: an exploratory study. *Journal of Psychosomatic Obstetrics and Gynecology* 33: 7–14.

Reinhart, C.M. and Rogoff, K.S. (2009). The aftermath of financial crises. *American Economic Review* 99: 466–72.

Seng, J.S., Low, L.K., Sperlich, M., Ronis, D.L. and Liberzon, I. (2011) Post-traumatic stress disorder, child abuse history, birthweight and gestational age: a prospective cohort study. *BJOG* 118: 1329–39.

Stuckler, D., Basu, S., Suhrcke, M., Coutts, A. and McKee, M. (2009). The public health effect of economic crises and alternative policy responses in Europe: an empirical analysis. *The Lancet* 374: 315–23.

Timmermans, S,, Bonsel, G.J., Steegers-Theunissen, R.P., Mackenbach, J.P., Steyerberg, E.W., Raat, H. *et al.* (2011). Individual accumulation of heterogeneous risks explains perinatal inequalities within deprived neighbourhoods. *European Journal of Epidemiology* 26: 165–80.

van den Berg, M.P., van der Ende, J., Crijnen, A.A., Jaddoe, V.W., Moll, H.A., Mackenbach, J.P. *et al.* (2009). Paternal depressive symptoms during pregnancy are related to excessive infant crying. *Pediatrics* 124: e96–103.

Nurturing the next generation of early childhood leaders

Rachel Machefsky
Early Childhood Development Specialist, Bernard van Leer Foundation, The Hague, Netherlands

Based on interviews with:

Lynette Aytch
Director, Leadership Development Institute, Zero to Three, Washington DC, USA

Mark Elliott
Global Leaders Program Director, World Forum Foundation, Washington DC, USA

Anita Gurgel
Education Consultant, Africa Early Years Fellowship, The World Bank, Washington DC, USA

Kay Lankreijer
Programme Coordinator, Bernard van Leer Foundation, The Hague, Netherlands

As the conversation shifts from 'why invest' in the early years to 'how to invest', there is a need for leadership in the field of early childhood to champion, implement and advance the field and bring about breakthrough change at scale. A growing range of initiatives is responding to this need. Earlier this year, the World Bank's Africa Early Years Fellowship welcomed its first cohort of participants, and the Bernard van Leer Foundation held its second one-week residential course in scaling early childhood initiatives at Harvard University's John F. Kennedy School of Government. These initiatives join two more long-standing leadership programmes: the 18-month Zero to Three Fellowship, which has run since 1981, and the World Forum Foundation's two-year Global Leaders programme, which began in 2004.

As Mark Elliott, the Global Leaders Program Director, observes: 'Leadership drives policy, practice and innovation – without leadership there is a vacuum of action.' Lynette Aytch, Director of the Leadership Development Institute at Zero to Three, observes that leadership comes in many forms. She says:

> *Leaders are not just eminent academic or political figures. Anyone can be a leader in their own context. They are practitioners providing services, business leaders drawing attention to early childhood, or researchers advancing our understanding of child development. Zero to Three Fellows come from a range of different contexts, but all have the ability to become a catalyst for change and mobilise others around a shared vision*

Lynnette continues: 'It can be difficult to find funding for leadership development because there is an assumption that "leaders are not made, leaders are born".' Perhaps that helps to explain Mark Elliott's observation: 'Part of me is surprised that there hasn't been more work done in leadership development before.'

In brief, the four initiatives now serving those aspiring to become leaders in the early childhood field are:

- **Zero to Three Fellowship** Participants define a personal 'action plan' and pursue it over the 18-month course, helped by virtual monthly meetings, four in-person retreats, coaching, and mentoring. The current cohort consists of 15 participants; since 1981, over 280 professionals from across the USA and nine other countries have completed the Fellowship.

- **Global Leaders for Young Children** A two-year course including online and in-person meetings, aiming to developing a community of advocates for young children. The current cohort comprises 33 participants from 21 countries; since 2004, more than 200 have participated from 61 countries.
- **Scaling Early Childhood Initiatives** The Bernard van Leer Foundation-funded one-week residential course at Harvard University's John F. Kennedy School of Government is now in its second year. The inaugural course in 2016 had 40 participants, and 44 participated in 2017.
- **Africa Early Years Fellowship** The first cohort of 20 participants began work in March 2017 on an initial one-year contract working for the World Bank on early childhood, combined with virtual and in-person learning and mentoring.

Leaders from diverse backgrounds

There seems to be no shortage of enthusiasm from potential participants. When the World Bank Early Learning Partnership advertised its inaugural Africa Early Years (AEY) Fellowship programme, for example, it received 3000 applicants. Anita Gurgel, who runs the Fellowship, says:

> *We targeted young professionals, aged 25 to 40, from Africa and based in Africa. They came from a wide variety of backgrounds. Some are doctors or nurses, some are teachers or have PhDs in education. We have economists, health financing specialists, child protection experts, public health and nutrition professionals, university professors, entrepreneurs and authors, emergency workers with experience in refugee camps, and former government officials from a variety of ministries serving mothers and young children.*

'We believe that transitioning effective ideas to scale is the next frontier in early childhood development.'

From the applicants, 20 were selected and are currently based in 14 countries in Africa. Earlier this year, they each began an initial one-year contract, which can be extended for a second year, involved in several multi-sectoral early childhood programmes, working with a World Bank team to support their country's government. The work is combined with professional development including mentorship, a ten-day orientation in Washington DC, a one-week fieldwork experience, in-person workshops and an online course on the science of early childhood, in partnership with Aga Khan University.

Gurgel says:

> *African governments are increasingly requesting support to scale-up investments in the early years, and demand from parents is growing as well. But delivering those services at scale and with quality is a hard task even for developed countries, and even more for developing nations. The Fellowship will build the capacity of participants to advise and support African country governments on delivering for young children and their families, reducing their reliance on technical assistance from abroad.*

Another aim of the Fellowship is to raise the profile of the early childhood sector among young African professionals, by demonstrating that it can be a viable and prestigious field of study and work. The Fellowship gives significant opportunities for learning on the job and professional growth. Programmes to groom young business leaders have been common for many years, and the social sector is also increasingly appreciating the value of investing in developing competent professionals through leadership programmes.

While the AEY Fellowship is the only one of the four programmes with an explicitly regional scope, Mark Elliot explains that the Global Leaders programme is:

increasingly shifting towards a regional focus, working closely with regional early childhood-focused networks such as ARNEC (Asia Pacific Regional Network for Early Childhood), ISSA (the International Step by Step Association) and the Africa Early Childhood Network (AFCAN). This is the third cohort to be organised around regional networks.

'People with a strong voice and strong advocacy skills can move the needle on early childhood issues.'

Bringing together partners for scale

Meanwhile, the Bernard van Leer Foundation's one-week residential executive education course on leading and scaling early childhood initiatives – in partnership with the John F. Kennedy School of Government at Harvard University – was originally inspired by a national initiative for participants from Brazil led by the Fundacão Maria Cecilia Souto Vidigal and the Harvard Center on the Developing Child. This course focused on teaching the neuroscience of early childhood development and now has alumni from the Federal House and Senate, from multiple political parties who together drafted a new law on promoting early childhood development, and municipal mayors who started implementing municipal policies for young children.

The success of the Brazilian course inspired the development of a global course with a focus on how to scale-up early childhood initiatives and it is now into its second year of a planned five-year run. On page 40 of this issue of *Early Childhood Matters*, you can read about the experience of one participant in the 2016 course, Erik Steegers from the Mothers of Rotterdam programme. Kay Lankreijer, Programme Coordinator at the Bernard van Leer Foundation, explains:

Participants come from around the world in groups of around five to seven people who are all working on a specific initiative.

We make sure that we include representatives from all the partners who are relevant to scaling that initiative or, more specifically, the working elements of that initiative – government, business, foundations, academia, civil society. There is preparatory work before the six days at Harvard, so all the participants come with practical challenges to discuss in relation to a real-world case they are working on.

The course is divided into a series of lectures that provide different analytical frameworks for thinking about scale and another set that addresses specific skills needed to achieve scale such as leadership, team building and persuasion. Each afternoon, teams work on refining their scale-up plans and they then present to the whole group at the end of the week. It aims to get participants to think about issues such as what context is needed for scale-up, how to ensure reliable financial streams, how to make sure that new frontline workers continue the elements of the programme that first made it effective, and how to measure and monitor impact at scale.

Michael Feigelson, the Foundation's Executive Director, adds:

We believe that transitioning effective ideas to scale is the next frontier in early childhood development. We wanted to build a course that would give the people who are out there trying to make that happen an opportunity to step back, reflect and make a plan and, in doing so, to build a community of leaders grappling with and overcoming the challenges of scale together.

△ *Photo: Taylan Dogan, New Zealand Tertiary College*

The future of leadership

Participants in the Harvard course are then expected to undertake follow-up work, and a strong emphasis on supporting alumni also characterises the other established initiatives. Mark Elliott of Global Leaders comments:

> *People with a strong voice and strong advocacy skills can move the needle on early childhood issues, and a big part of the work is building a community who can support each other in this. Several of the current leading figures in regional networks were part of our earlier cohorts. Our mantra is: 'once a global leader, always a global leader'.*

Zero to Three also has a strong network sense, connecting current fellows to each other and to past fellows. In 2012, it formally established the Academy of Zero to Three Fellows to help the alumni to sustain relationships and leverage resources, expertise and influence for their mutual benefit and support. Many of the programme's alumni have gone on to senior positions in the early childhood field.

'It can be difficult to find funding for leadership development because there is an assumption that "leaders are not made, leaders are born".'

As Lynette Aytch explains, the focus of the Zero to Three Fellowship has evolved over the years to reflect changing needs in the early childhood field:

> *Initially, in the 1980s and 1990s, the focus was on mentoring 'knowledge creators'; by the turn of the century, that had shifted to recognise the growing need for 'knowledge disseminators' to translate scientific research to a broader base of professionals and the general public.*
>
> *In the last few years, our ambition has been to cultivate 'change agents', with a focus on adaptive leadership and collective impact theory – that is, an understanding that substantial change is not accomplished alone, but is a collective effort.*

With the Zero to Three Fellowship and the Global Leaders programme having been joined by the Harvard course and AEY Fellowship, in the future more leaders will be able to scale early childhood interventions all over the world, at all levels.

Further details

More information is available via the following web pages:

- Africa Early Years Fellowship
  worldbank.org/en/region/afr/brief/world-bank-group-africa-early-years-fellowship
- Global Leaders
  worldforumfoundation.org/about-us/
- Harvard course on scaling and leading early childhood initiatives
  bernardvanleer.org/cases/harvard-course-on-scaling-up/
- Zero to Three Fellowship
  zerotothree.org/resources/59-zero-to-three-fellowship-program-description

SCALING

Accelerating the effective scaling of Kangaroo Mother Care and related interventions: lessons from 20 years of experience

Nathaniel Foote
Chairman, TruePoint; Senior Fellow, Center on the Developing Child, Harvard University, Cambridge, MA, USA

Giorgio Tamburlini
Center for Child Health and Development, Trieste, Italy

Kangaroo Mother Care (KMC) is widely recognised as an important evidence-based, low-cost intervention for improving the health and survival chances of premature and low-birthweight infants. So called because it resembles how kangaroo babies are carried around in their mother's pouch, KMC consists of early, continuous and prolonged skin-to-skin contact between the caregiver and the baby, exclusive breastfeeding or breastmilk, and context-appropriate discharge and follow-up provided to the baby and his or her family.

The practice dates to a hospital in Colombia in the late 1970s, where incubators were overcrowded. Doctors instead encouraged mothers to wrap their premature newborn against their chest to keep them warm. They noticed good results, and published their findings. Interest grew, and in 1996 a group of researchers from different countries and from the World Health Organization (WHO) gathered in Trieste, Italy, and formed the International Network of Kangaroo Mother Care (INK).

Immediate skin-to-skin contact has been shown to benefit all babies (Moore *et al.*, 2016), but the benefits of early, continuous and prolonged skin-to-skin contact (an average of 18 hours per day) are especially profound for low-birthweight (LBW) babies. LBW babies include those born before 37 weeks and those born later but still small for their gestational age. They account for around 15.5% of all births globally – and the proportion is even larger in low- and middle-income countries (Beck *et al.*, 2010; Blencowe *et al.,* 2013). They are significantly more likely to die shortly after birth or during their first year, and those who survive are significantly more likely to develop long-lasting health problems, particularly sensory deficit and neurodevelopmental disabilities (Lawn *et al.*, 2014). They are also more likely to show signs and symptoms of instability in various dimensions such as sleeping and eating patterns, which adds to parental stress and combines with disappointment at the pregnancy outcome to put them at higher risk of being maltreated or neglected by their caregivers (Bakewell-Sachs and Gennaro, 2004; Frye *et al.*, 2010; Kugelman and Colin, 2013).

KMC is simple to implement in the sense that it requires no specialised medical equipment; it does, however, often require fundamental changes in mindsets and procedures. Over the last two decades, a strong and growing network

of committed practitioners, with support from the WHO and other major international players, have helped to establish KMC 'centres of excellence' in over 30 countries, and KMC units in thousands of hospitals worldwide. Relative to most other complex health interventions, KMC is already a success story of scaling in low- and middle-income countries.

However, relative to the scale of the problem, the coverage of KMC still remains insufficient – even in the countries where it has been implemented most successfully. Comprehensive implementation could contribute to averting an additional 770,000 neonatal infant deaths annually (Howson *et al.*, 2013; Lawn *et al.*, 2013b). For the infants who survive, recent evidence confirms that KMC has a lasting impact on their physical, social, emotional and cognitive development (Frye *et al.*, 2010; Charpak *et al.*, 2017).

As part of a workshop to mark the 20th anniversary of KMC, a group of practitioners and advocates met in November 2016 in Trieste to reflect on the lessons of two decades of scaling KMC, and to develop an approach to accelerate it. Research and case studies have shown that KMC implementation is most effective when it meets three criteria: it is integrated, staged and strategic.

△ *Photo: Courtesy Kangaroo Mother Care*

1 Integrated: KMC as the centrepiece of a package of interventions

Mitigating the risks associated with prematurity and low birthweight requires not only timely and effective care at birth and in the immediate postnatal period, but also adequate follow-up and support over the first two or three years. Many of the complications that manifest in this time – such as visual or hearing deficiencies, motor deficiency and cognitive impairment – can be prevented or cured (Charpak *et al.*, 2017).

An integrated package of essential interventions for low-birthweight infants – 'KMC and beyond' – would include:

- *antenatal care and care at birth:* in case of signs of premature delivery, planning for an appropriate place of birth where there is adequate equipment and skills – for example, for resuscitation, including availability of small-size masks (Lawn *et al.*, 2013a, 2013b)
- *neonatal care:* KMC, initiating breastfeeding early wherever possible, controlling temperature, monitoring for hypoglycaemia, preventing infection and applying continuous positive airway pressure for respiratory distress (WHO, 2003; Lawn *et al.*, 2013a, 2013b)
- *infant and child care:* giving parents guidelines for care, following up to identify and address developmental issues, supporting positive parenting practices, and supporting the family through home visiting and facilitating early education or day care (Lawn *et al.*, 2013a).

'KMC implementation is most effective when it meets three criteria: it is integrated, staged and strategic.'

Considering the burden of years of life lost and years lived with disability, and the effectiveness and the low cost of interventions, it should be a top public health priority to deliver this integrated continuum of care to premature and low-birthweight babies.

2 Staged: KMC implementation matching country readiness and capability

This full package of 'KMC and Beyond' interventions is, however, beyond the capacity of many health systems in low- and middle-income countries. There is a natural evolution to each country's progress in scaling-up KMC coverage and complementing it with other key interventions in the postnatal period and with adequate follow-up.

As shown in Figure 1, the most effective approach to KMC evolution proceeds along three stages:

- First, establish a 'centre of excellence' (CoE) and focus on in-hospital care.
- Next, build technical capacity and expand coverage to district-level hospitals and primary health facilities.
- Ultimately, integrate more comprehensive follow-up and family support at community level, as allowed by increases in country capacity.

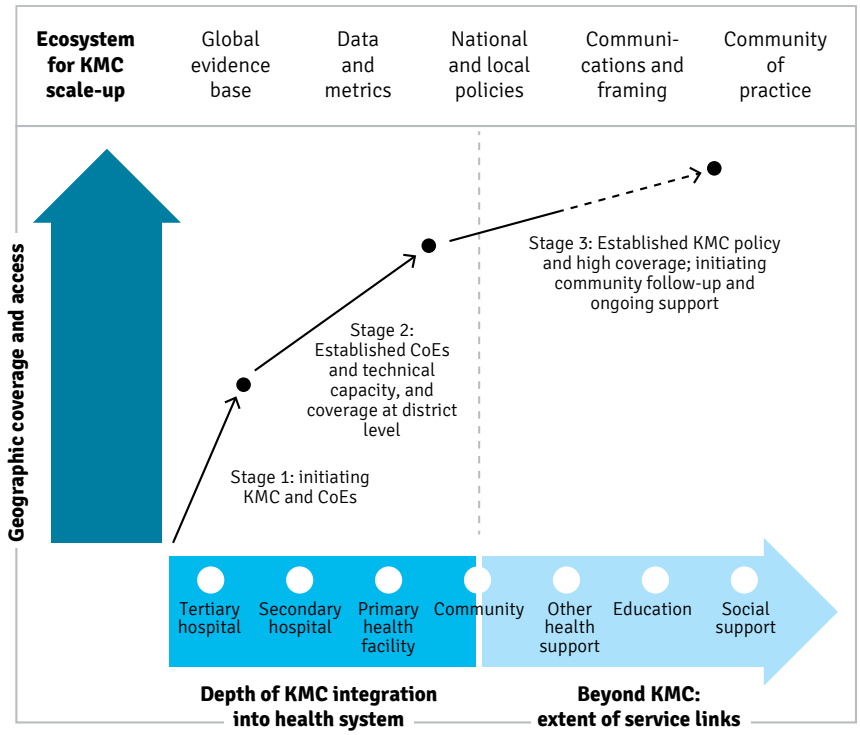


Figure 1 Stages of KMC evolution

3 Strategic: mobilise key actors around a joint agenda

A primary driver of KMC expansion over the past 20 years has been committed practitioner champions. In particular, the Kangaroo Foundation of Colombia has trained hundreds of practitioners, who have then been capable of establishing KMC in their home hospitals.

The degree of spread beyond those initial KMC implementations has varied widely, as it requires the commitment of many different stakeholders to implement and scale successfully. Several studies and systematic reviews have already identified health system enablers and obstacles to implementation and dissemination of KMC (Seidman *et al.*, 2015; Chan *et al.*, 2016). For example:

- Neonatal medical specialists need to make fundamental changes in their practice, and other staff require extensive training.
- Hospital administrators need to change hospital procedures, such as opening the neonatal ward to visitors 24 hours a day, and allocating resources to make space for parents to stay in the neonatal area with their low-birthweight infants.
- Government health ministries and insurers may need to change medical reimbursement policies to overcome economic and logistical disincentives to KMC.

Key stakeholders for country scale-up – ministries of health, other government institutions, professional societies and non-health actors – have often not been sufficiently engaged. Lack of strategic alignment across sectors has meant that efforts to scale KMC have often met resistance at the hospital, regional, and national level, despite the strong evidence for the efficacy of the practice. More effective progress will require greater strategic alignment as well as stronger country-level leadership.

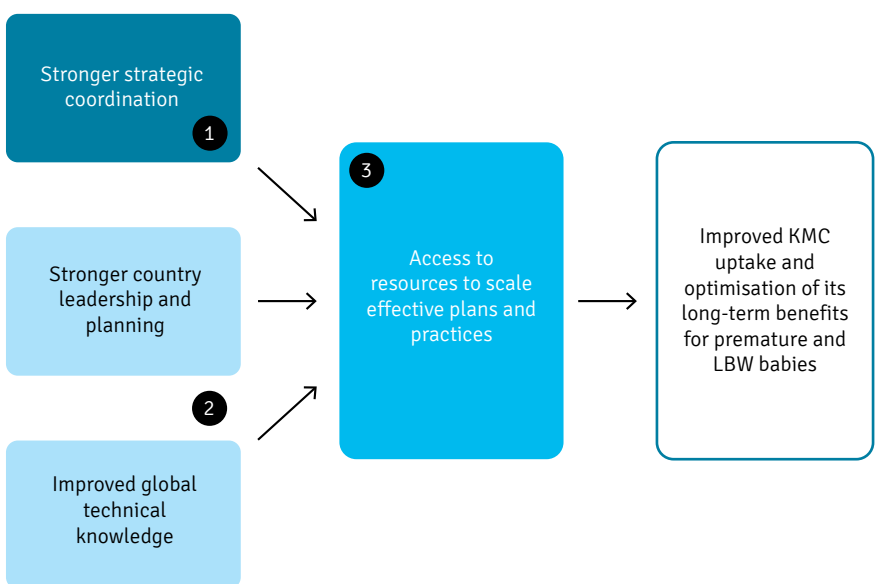
A strategy for 'KMC and Beyond'

To accelerate the pace and widen the scope of 'KMC and Beyond' implementation, we envision three mutually reinforcing initiatives, as summarised in Figure 2:

- Building on 20 years of momentum from the INK, bring greater strategic coordination and professionalisation to the global network of practitioners – for example, enhancing the social marketing and communication of KMC and facilitating better alignment of KMC with other platforms and collaborative efforts related to neonatal care and adjacent spaces.
- Catalyse country-level leadership and planning through support for country- and region-level workshops and cross-sectoral coordination, and enhanced global technical leadership on issues that would benefit from shared knowledge such as sharing effective approaches in training and experiences of implementation.
- Create a high-profile, global challenge grant mechanism that will incentivise countries to develop actionable plans for national scale-up of key interventions, and subsequently provide funding for the transitional investments required for plans meeting predefined criteria, where the country government has committed to provide ongoing operational funding.

▷

Figure 2 Initiatives for 'KMC and beyond'



KMC has come a long way in the last 20 years – but millions more premature and low-birthweight infants around the world will have their lives transformed if we can find more effective approaches to further scale-up this evidence-based, low-cost intervention.

Acknowledgements

Adriano Cattaneo of the International Kangaroo Care Network, and Jenny Rabinowich, Matthew Rehrig, and Moitreyee Sinha of Global Development Incubator, collaborated on an earlier concept note from which this article is drawn. Grand Challenges Canada provided funding for the effort.

References

Bakewell-Sachs, S. and Gennaro, S. (2004). Parenting the post-NICU premature infant. *American Journal of Maternal Child Nursing*, November/December 29(6): 398–403.

Beck, S., Wojdyla, D., Say, L., Betran, A.P., Merialdi, M., Harris Requejo, J. *et al.* (2010). The worldwide incidence of preterm birth: a systematic review of maternal mortality and morbidity. *Bulletin of the World Health Organization* 88: 31–8. |

Blencowe, H., Cousens, S., Chou, D., Oestergaard, M., Say, L., Moller, A.-B. *et al.* (2013). Born too soon: the global epidemiology of 15 million preterm births. *Reproductive Health* 10 (Suppl. 1): S1.

Chan, G.J., Labar, A.S., Wall, S. and Atun, R. (2016). Kangaroo mother care: a systematic review of barriers and enablers. *Bulletin of the World Health Organization* 94: 130–41.

Charpak, N., Tessier, R., Ruiz, J.G., Hernandez, J.T., Uriza, F., Villegas, J. *et al.* (2017). Twenty-year follow-up of Kangaroo Mother Care versus traditional care. *Pediatrics* 139(1): e20162063.

Frye, R.E., Malmberg, B., Swank, P., Smith, K. and Landry, S. (2010). Preterm birth and maternal responsiveness during childhood are associated with brain morphology in adolescence. *Journal of the International Neuropsychology Society* 16(5): 784–94.

Howson, C.P., Kinney, M.V., McDougall, L. and Lawn, J.E. (2013). Born too soon: preterm birth matters. *Reproductive Health* 10 (Suppl. 1): S1.

Kugelman, A. and Colin, A.A. (2013). Late preterm infants: near term but still in a critical developmental time period. *Pediatrics* 132(4): 741–51.

Lawn, J.E., Davidge, R., Paul, V.K., von Xylander, S., Johnson, J. de G., Costello, A. *et al.* (2013a). Born too soon: care for the preterm baby. *Reproductive Health* 10 (Suppl. 1): S5.

Lawn, J.E., Kinney, M.V., Belizan, J.M., Mason,E.M., McDougall, L., Larson, J. *et al.* (2013b). Born too soon: accelerating actions for prevention and care of 15 million newborns born too soon. *Reproductive Health* 10 (Suppl. 1): S6.

Lawn, J.E., Blencowe, H., Oza, S., You, D., Lee, A.C.C., Waiswa, P. *et al.* (2014). Every Newborn: progress, priorities, and potential beyond survival. *The Lancet* 384: 189–205.

Moore, E.R., Bergman, N., Anderson, G.C. and Medley, N. (2016). Early skin-to-skin contact for mothers and their healthy newborn infants. *Cochrane Database of Systematic Reviews* 2016: 11.

Seidman, G., Unnikrishnan, S., Kenny, E., Myslinski, S., Cairns-Smith, S., Mulligan, B. and Engmann, C. (2105). Barriers and enablers of kangaroo mother care practice: a systematic review. *PLoS ONE* 10(5): e0125643.

World Health Organization. (2003). *Kangaroo Mother Care: A Practical Guide*. Geneva: WHO.

Promoting positive parenting practices in Niger through a cash transfer programme

Oumar Barry
Senior Lecturer, Faculty of Arts and Humanities, Cheikh Anta Diop University, Dakar, Senegal

Ali Mory Maïdoka
Coordinator, Safety Nets Unit, Office of the Prime Minister, Government of Niger

Patrick Premand
Senior Economist, Social Protection and Labor Global Practice, World Bank, Washington DC, USA

In 2011, the Government of Niger set up a national social safety net programme – the 'Projet Filets Sociaux'. It includes unconditional cash transfers as well as behavioural change measures to promote investments in children.[1] Lessons from programme implementation and evaluations so far highlight the opportunities for this model to reach a large number of poor families and induce changes in parenting practices. Challenges to achieve impacts on child development and ensure quality during scale-up are also underlined.[2]

Few countries face bigger early childhood development challenges than Niger, which has one of the lowest levels of human development in the world (United Nations Development Programme (UNDP), 2016). Children aged under 5 make up a quarter of the population, with women having on average 7.6 children (Institut National de la Statistique (INS), 2015). The poverty rate is 45.4% (INS and World Bank, 2016). Only about half of children aged 7–12 are enrolled in primary school (INS, 2013), and access to preschools is very limited. 44% of children are stunted, half of them severely (INS, 2013). Rapid population growth is increasing pressure on already low-performing social services, and meeting the challenges of improving early childhood development requires urgent policy action and fast scale-up of quality interventions.

The Projet Filets Sociaux provides unconditional cash transfers of 10,000 CFA Francs (around EUR 15) per month for a total of 24 months to poor households across the country, selected through a process of geographical targeting and subsequent identification of the poorest households within selected villages. Alongside accompanying measures to support more productive livelihoods and resilience, the cash transfer programme includes a behavioural change component (*volet comportemental*) which promotes parenting practices conducive to early childhood development.[3]

The behavioural change component originally focused on a set of material on essential family practices developed in Niger: exclusive breastfeeding for the first six months; complementary feeding after six months; sleeping under treated mosquito nets; treating diarrhoea with oral rehydration solution; handwashing and hygiene; use of preventive healthcare services; health visits for children at the first sign of illness; and family planning. An early pilot then suggested that additional material on nutrition and psycho-social stimulation would help to align with the objectives of

1 For additional discussions on linkages between social protection and early childhood development, see for example: Alderman, 2016; Britto *et al.*, 2013; Attanasio *et al.*, 2014; Fiszbein and Schady, 2009; Macours *et al.*, 2012.

△ *Photo: Andrea Borgarello/World Bank*

the safety nets project and to take a more holistic approach to child development. As a result, new modules were developed on language stimulation; play; school readiness, enrolment and attendance; brain development; discipline, punishment and conflict management; and attachment and socio-emotional development.

A comprehensive manual was produced to detail the content of each of these modules. It also contains implementation protocols to ensure consistency of delivery across a large number of actors as part of the safety nets project, as well as to support monitoring and quality control during scale-up. The intervention manual itself was developed through a series of field pre-tests and iteratively improved based on experience during implementation. It adopts a positive deviance approach – that is, seeking to identify and work with existing examples of good practice in a community and spread them by triggering community dynamics.[4]

Defining the parenting training model required careful consideration of the feasibility of its implementation at scale. The cash transfer programme had a relatively rapid expansion path, so the implementation modalities needed to ensure sufficient quality without being too costly or operationally complex. The safety nets project is managed by *Cellule Filets Sociaux* (CFS) in the Office of the Prime Minister, and the implementation of the behavioural accompanying measures is contracted out to local NGOs – in total, 16 have worked to deliver the model so far.

The behavioural change intervention is designed to last 18 months in each participating village, starting a few months after the cash transfers. Each

2 The Niger Safety Nets Unit (*Cellule Filets Sociaux*) at the Office of the Prime Minister of the Government of Niger manages the safety nets project, and its behavioural change component. World Bank staff, in particular team leader Carlo del Ninno, CFS staff, and partner NGOs need to be acknowledged for their strong efforts on project implementation as well as to ensure solid evaluations and learning. The Adaptive Social Protection Programme, Early Learning Partnership and Strategic Impact Evaluation Fund at the World Bank provided critical resources for technical assistance and evaluations. UNICEF co-financed a qualitative evaluation and provided complementary technical assistance. This article is based on Premand *et al.* (2016). The findings, interpretations, and conclusions expressed in this article do not necessarily reflect the views of the Executive Directors of the World Bank or the governments they represent.

3 Aside from the component on cash transfer and accompanying measures, the project also includes a cash-for-work programme.

4 See Harkness *et al.* (2012) for a discussion of cultural considerations in establishing community dynamics.

beneficiary household is invited to participate in three activities per month. First, a village assembly is organised by NGO field staff, targeting around 50 beneficiaries. It is also open to non-beneficiaries in those villages. Second, a discussion session (*causerie*) is coordinated by a community educator for small groups averaging 25 beneficiaries. The community educator then visits each beneficiary from the group in their home.[5] The total implementation costs for these measures are estimated at USD 86 per beneficiary household[6], and the indirect oversight costs at USD 14.

'The Projet Filets Sociaux provides unconditional cash transfers and includes a behavioural change component which promotes parenting practices conducive to early childhood development.'

Systematic efforts to learn from implementation and evaluations

In five years of implementation, over 3300 community educators have been trained, the programme has been implemented in over 1500 villages and has reached over 87,000 cash transfer beneficiary households. Participation is not required for beneficiaries to receive their monthly cash transfers, but it has still been consistently higher than 90%. Reflecting a strong social dynamic around the programme, many non-beneficiaries have also participated. An estimated 130,000 households that do not benefit from the cash transfers have been indirectly exposed to the behavioural change component in participating villages, bringing the total population reached to over 200,000 households, or approximately 1.5 million people.

A range of studies and evaluations have been embedded in the programme to learn from the set-up and scale-up of the behavioural change accompanying measures.[7] Qualitative evaluations assessed the quality of implementation and how the messages were received by local populations. They confirmed the high level of participation documented by the project monitoring system, as well as strong social dynamics and community engagement. The content of the parenting training – especially newer themes related to psycho-social stimulation – were found to be well aligned with the interests and aspirations of poor households on whom the programme focused. The messages promoted by the programme were in general well received and understood.

The overall level of implementation was satisfactory, although some gaps in the fidelity of implementation were found. For example, NGO staff were not mentoring community educators sufficiently or consistently enough. Some community educators had very low capacity and were not performing very well. Interestingly, however, although NGO staff had better education levels, they were found at times not to have internalised implementation protocols as well as community educators. Community educators may have had higher intrinsic motivation as they were implementing the programme in the villages where they lived. Finally, although quality control processes were defined, corrective measures were not taken systematically enough when issues were found.

A large-scale prospective randomised controlled trial was set up to identify the value-added of the programme's behavioural change component on

5 An NGO field staff team covers ten villages on average, and a community educator 25 beneficiaries (so that there are two per village on average). The project has staff in quality control and oversight functions at the community, regional and national levels.

6 The direct costs include costs of paying community educators, who are typically not beneficiaries of the cash transfers but receive an allowance of approximately USD 20 per month, an amount similar to what beneficiaries receive.

7 See Premand *et al.* (2016) for additional information on the studies mentioned, in particular on the randomised controlled trial.

parenting practices and early childhood development. The impact evaluation first assessed to what extent the parenting training indeed led to behavioural changes, and then tested whether it resulted in improvements in final outcomes. Results showed impacts in 9 out of 14 thematic areas (Premand *et al.*, 2016). Exclusive breastfeeding and complementary feeding improved, which contributed to enhancing children's food security. A lower reliance on harsh discipline was found. Changes in some preventive health behaviours were also observed, although these were more mixed. In contrast, there was no impact on the proportion of children whose births were registered and very limited impact on education outcomes. Finally, the study documented strong spillover effects in a range of practices across participating villages. This is important, as it shows that changes in parenting practices also took place in households that were not benefiting from the cash transfer programmes.

Despite these observed changes in behaviours, the parenting training had limited impacts on children's final outcomes in the short term. It led to small improvements in children's socio-emotional development. Although nutrition and health practices improved, however, anthropometric outcomes did not. Similarly, despite improvements in psycho-social stimulation and child protection practices, no impacts on children's cognitive development were observed.

Impacts were measured around the time households exited from the programme, when they had been exposed to the behavioural measures for approximately 18 months. It remains possible that some changes in behaviours may take more time to manifest in final outcomes among children. In the end, these results probably also reflect the highly stressed environment in which children live in rural Niger, with interplay among multiple risk factors including widespread adult illiteracy, low-quality social services, poor sanitation and a challenging environment. Improvements in these other areas will also be needed in parallel to promoting behavioural changes.

'A range of studies and evaluations have been embedded in the programme to learn from the set-up and scale-up of the behavioural change accompanying measures.'

Challenges for implementation at scale

Lessons from implementation and the results of the various evaluations reveal two main challenges that the programme is now aiming to address to ensure sustainability at scale.

The first is a systemic challenge: how to ensure quality of implementation of parenting training delivered through a national safety nets system. In the current delivery model, through NGOs, a critical issue relates to effective supervision of the fidelity of implementation, and the establishment of clear feedback loops to enforce performance-based contracts. The CFS is considering institutionalising the implementation of the accompanying measures through its staff at the level of communes, a layer of local government in Niger. This approach may help address some quality issues that have arisen when implementation is contracted out. At the same time, new quality assurance

protocols will be needed, possibly including outside audits or regular process evaluations.

The second challenge relates to effective inter-sectoral coordination. The behaviour change measures focused on providing information to parents, in a household-based approach that did not seek to be a substitute for the institutions responsible for delivering services in the health, nutrition, education, and water and sanitation sectors. Strengthening the inter-sectoral linkages with technical ministries and making them fully effective at the national, regional and local level is a first-order priority for which efforts are underway.

References

Alderman, H. (2016). *Leveraging Social Protection Programs for Improved Nutrition: Summary of evidence prepared for the Global Forum on Nutrition-Sensitive Social Protection Programs, 2015.* Washington DC: World Bank Group. Available at: http://documents.worldbank.org/curated/en/462981467040874717/Leveraging-Social-Protection-Programs-for-Improved-Nutrition-summary-of-evidence-prepared-for-the-Global-Forum-on-Nutrition-Sensitive-Social-Protection-Programs-2015_ (accessed May 2017).

Attanasio, O.P., Fernández, C., Fitzsimons, E.O.A., Grantham-McGregor, S.M.; Costas, M. and Rubio-Codina, M. (2014). Using the infrastructure of a conditional cash transfer program to deliver a scalable integrated early child development program in Colombia: cluster randomized controlled trial. *BMJ* 349.

Britto, P., Williamson, A., Snow, T. and Mankad, K. (2013). *Social Protection Programs and Early Childhood Development: Unexplored Potential. Yale and Plan International.* Melbourne: Plan International Australia.

Fiszbein, A. and Schady, N. (2009). *Conditional Cash Transfers: Reducing Present and Future Poverty.* Washington DC, World Bank.

Harkness, S., Super, C.M., Johnston Mavridis, C., Barry, O. and Zeitlin, M. (2012). Culture and early childhood development: implications for policy and programs. In: Britto, P.R., Engle, P. and Super, C.M. (eds) *Handbook of Early Child Development Research and its Impact on Global Policy.* New York: Oxford University Press.

Institut National de la Statistique, Government of Niger (INS). (2013). *Enquête Démographique et de Santé et à Indicateurs Multiples 2012.* Niamey: INS. Available at: http://www.stat-niger.org/statistique/file/EDSN_MICSIV2012/EDSN_MICSIVRapportdefinitif.pdf (accessed May 2017).

INS. (2015). *Etat et Structure de la Population du Niger en 2012.* Niamey: INS. Available at: http://www.stat-niger.org/statistique/file/RGPH2012/ETAT_STRUCTURE_POPULATION.pdf (accessed May 2017).

INS and World Bank. (2016). *Rapport Provisoire de la deuxième enquête nationale les conditions de vie des ménages et l'agriculture* (ECVMA 2014). Niamey: INS.

Macours, K., Schady, N. and Vakis, R. (2012). Cash transfers, behavioral changes, and cognitive development in early childhood: evidence from a randomized experiment. *American Economic Journal: Applied Economics* 4(2): 247–73.

Premand, P., Barry, O. and Smitz, M. (2016). *Transferts Monétaires, Valeur Ajoutée de Mesures d'Accompagnement Comportemental, et Développement de la Petite Enfance au Niger. Rapport descriptif de l'évaluation d'impact à court terme du Projet Filets Sociaux.* Washington DC: World Bank. Available at: http://documents.worldbank.org/curated/en/26521979 (accessed May 2017).

United Nations Development Programme (UNDP). (2016). *Human Development Report 2016, Human Development for Everyone.* New York: UNDP.

From small to scale: the expansion of pre-primary in Bangladesh

Zannatun Zahar
ECCD Manager, Shishuder Jonno, Save the Children, Dhaka, Bangladesh

Khosneara Khondker
Sponsorship Manager, Shishuder Jonno, Save the Children, Dhaka, Bangladesh

In recent years, Bangladesh has made remarkable progress towards providing pre-primary education for all young children. While much more remains to be achieved, the country's experience so far shows how quickly services for young children can reach scale through well-organised collaboration between the government and civil society partners. These partners include Save the Children, which first started work on early childhood development in Bangladesh in 1983.

At that time, government schools' provision of so-called 'baby classes' – one year of preschool before the start of formal schooling at age 6 – was sporadic, temporary and unstructured. Still, there was growing recognition of the importance of early childhood, signalled in 1990 when Bangladesh became one of the first countries to ratify the Convention on the Rights of the Child and also signed the World Declaration on Education for All. By the early 2000s, however, the government's UNICEF-supported early childhood programming still reached only a small number of children, and the large majority of early childhood services continued to be provided by a range of civil society actors. Recognising this, in 2002 UNICEF and Save the Children took the initiative to form a national network of organisations working for young children. After gathering data through a nationwide survey to identify relevant organisations, the Bangladesh ECD Network (BEN) was formally launched in 2005. Since then, BEN has been conducting advocacy, sharing information and experiences, supporting cooperation, and building the capacity of stakeholders. The Institute of Educational Development at BRAC University, Dhaka, serves as its Secretariat. BEN currently has 172 members.

BEN has become a highly effective forum for collaboration between government and non-government organisations (NGOs). After the Ministry of Primary and Mass Education (MoPME) issued an Operational Framework for Universal Pre-Primary Education in 2008, for example, BEN and the government together followed up to develop guidelines on collaboration between government and NGOs for universal pre-primary education (PPE) in Bangladesh. These laid out the respective roles of the government and civil society sectors in scaling-up PPE, recognising respective resources and capabilities. It allowed, for example, case-by-case agreements for civil society actors to operate pre-primary provision in government schools (Institute for Child & Human Development, 2011).

△ *Photo: Save the Children*

In 2010, the government announced a new National Education Policy which for the first time formally recognised pre-primary as the first stage of the education system, with the stated aim to 'create an enthusiasm for learning'. The policy aimed to include first all 5 year olds in pre-primary provision, and then eventually all 4 year olds (Ministry of Education, 2010). By 2014, the government formally declared the aim of all primary schools of offering parents the option of pre-primary education for their children.

Comprehensive and consistent data collection is lacking to track progress, but the figures that are available suggest that progress in PPE expansion has been rapid and significant. For example, the Campaign for Popular Education (CAMPE), an active member of BEN, conducts periodic household surveys in representative districts. As shown in Figure 1, these found that between 2008 and 2013 – the most recent year in which a survey was conducted – net enrolment in pre-primary education jumped from 10.9% to 40.4%, an increase that was found to include children of both genders and urban and rural areas alike (CAMPE, 2013).

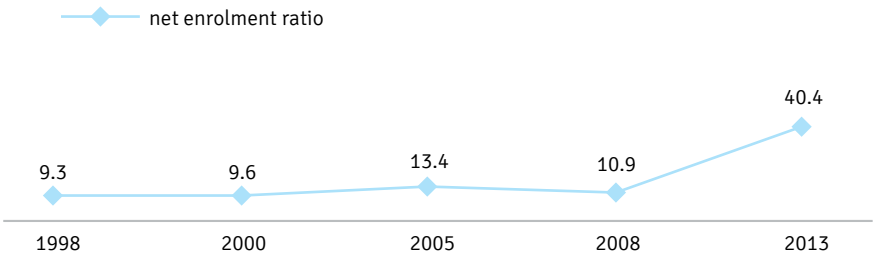


Figure 1 Changes in pre-primary net enrolment ratio in Bangladesh, 1998–2013

Source: CAMPE, 2013

More recently, a government census of primary schools in 2015 found that over 99% of government primary schools were already offering pre-primary provision, along with almost 95% of 'newly nationalised' primary schools (Ministry of Education, 2015). The newly nationalised schools brought under government management in 2014 were formerly managed by communities with some government support. As shown in Table 1, in total 93,247 institutions were offering pre-primary provision, serving a total of over 2.8 million children – roughly equally divided between boys and girls.

Government primary school	37,985
Newly nationalised primary school	23,949
Registered non-government primary school	92
Non-registered non-government primary school	1,278
Experimental school	13
Ebtedayee Madrasha	1,191
Community school	82
Other schools (private and NGO-run schools)	28,657
Total	**93,247**

Table 1 Number of institutions offering pre-primary education in Bangladesh in 2015

Source: Ministry of Primary and Mass Education, 2015

Despite these forward steps, challenges remain. For example, according to the 2013 CAMPE household survey, children from wealthier backgrounds were significantly more likely to be benefiting from pre-primary education, which typically requires some financial outlay from parents. According to a currently unpublished assessment of over 500 pre-primary institutions, carried out in late 2016 by the Directorate of Primary Education, there were wide variations in quality of classroom settings and training of teachers; age-appropriate educational materials were limited; and teaching methods were often overly focused on studying, rather than encouraging a love of learning through play and having fun.

Experimenting with different models

As the Government of Bangladesh aims for universal, quality pre-primary provision, the close relationship with civil society is important as it allows for various models to be experimented with, learned from and fine-tuned, which can then inform government policies. In 2006, for example, Save the Children began to implement a programme called 'Shishuder Jonno' (SJ), meaning 'For the Children', in both a rural district – Meherpur – and in an urban slum in Dhaka, involving pre-primary as part of a wider model covering children and young people, from birth to age 19.

At first, SJ took a family-centric approach, seeking to understand what parents wanted from preschool, and giving sessions on parenting and children's well-being. This evolved into a community-based model of pre-primary for 5 year olds in Meherpur, with classes located in the community. Local people donated land, assisted in the building of classrooms and volunteered for a school management committee. Teachers were recruited to conduct 2.5-hour classes each day, designing their own curriculum.

'Save the Children is currently advocating for the scaling-up of several initiatives which we have successfully piloted and developed in Bangladesh.'

However, as BEN worked with the government on scaling up, the SJ model provided useful inputs to advocacy and policy development. It shifted from a two-year model to a one-year model, as it became clear that the government was interested in initially universalising one year of pre-primary provision. The pedagogy and curriculum were formalised, and SJ partnered with the government to provide technical support in areas such as educational materials and building the capacity of teachers and management committees.

The question now is what models could reach children who are still without access to pre-primary education, children of working urban parents and in remote rural areas are proving among the hardest to reach effectively. Save the Children is currently advocating for the scaling-up of several initiatives which we have successfully piloted and developed in Bangladesh:

- **Early childhood development (ECD) camps** – for underprivileged children who live in remote areas. This involves groups of around eight to ten children coming together for 42-day sessions which give them some exposure to learning habits and activities that could support primary school readiness.
- **Early literacy and maths parenting programme** – sessions for parents and children to teach games and activities that parents can play with their children during everyday chores at home to promote early literacy and maths skills.
- **Reading for children** – sessions for parents and children to promote engagement with books, even among parents with a low level of literacy. Books are made available for lending and encouraging parents to look at pictures with their children and make up stories.
- **Early years pre-primary** – with government policy initially targeting 5 year olds but ultimately aiming to include younger children. This play-based curriculum was developed with the Ministry of Women and Children Affairs

and the Ministry of Primary and Mass Education. Based in primary schools, it involves two-hour sessions for 15–20 children aged 3 and 4 years. This model will enable the relative benefits of one versus two years of pre-primary education to be evaluated.

We are also working to develop a programme for younger children through the Early Stimulation Programme, working with parents to promote 'serve and return' communications, attachment and vocabulary development among children from birth to age 3. Following a successful pilot, we are working with the national healthcare system to roll out a five-minute message on cognitive stimulation that mothers can be given when they bring their babies to health clinics for checks.

'The need now is for empirical evidence of the effectiveness of the different models and approaches.'

Towards universal access

Taking a small pilot run by an NGO and bringing it to the kind of scale only governments can coordinate requires long-term partnering. Regular conversations and engagement are needed from local to central level, creating a sense of openness and trust, and a willingness to recognise when something is working and when there is a new approach to retool. Save the Children's involvement with BEN, and BEN's engagement with government, have shown that innovation is neither easy nor quick, but it is the only way to generate evidence that shows what the most effective programming approaches are to meet the varied needs of differing community contexts.

Bangladeshi policymakers and development partners alike are increasingly aware of the importance of early childhood investments to meeting the country's economic and social development objectives. The need now is for empirical evidence of the effectiveness of the different models and approaches in order to develop minimum standards of quality, monitoring systems and capacity building to address identified gaps.

References

Campaign for Popular Education (CAMPE). (2013). *New Vision, Old Challenges – The State of Preprimary Education in Bangladesh*, Education Watch 2013. Dhaka: CAMPE.

Institute for Child & Human Development. (2011). Guideline on GO-NGO collaboration for universal Pre-Primary Education in Bangladesh. Available at: http://ichdbd.org/document/document/GO_NGO_Collaboration_Guideline%20_Approved.pdf (accessed April 2017).

Ministry of Education, Government of Bangladesh. (2010). *National Education Policy 2010.* Dhaka: Ministry of Education. Available at: http://reliefweb.int/sites/reliefweb.int/files/resources/02.National-Education-Policy-2010-English.pdf (accessed April 2017).

Ministry of Primary and Mass Education, Government of Bangladesh. (2008). *Operational Framework for Pre-Primary Education.* Dhaka: MoPME. Available at: http://ichdbd.org/document/document/Operational_Framework_for_PPE.pdf (accessed April 2017).

Ministry of Primary and Mass Education, Government of Bangladesh. (2015). *Annual Primary School Census* 2015. Dhaka: MoPME. Available at: http://dpe.portal.gov.bd/sites/default/files/files/dpe.portal.gov.bd/publications/f2501e16_4f57_467b_8c67_48a5855f88fe/Final%20Draft%20APSC2015.pdf (accessed April 2017).

Promoting high-quality childcare at scale in Latin America

M. Caridad Araujo
Principal Economist, Division of Social Protection and Health, Inter-American Development Bank, Washington DC, USA

In Latin America, we have seen a rapid expansion of publicly funded childcare services for children younger than 3 years of age. While maternal employment can enhance families' incomes, and this will favour children's well-being, this new reality of early childhood care raises important policy questions.

In countries like Brazil, Chile, Colombia, Ecuador, and Uruguay, at least 40% of children are using childcare services by the time they are 3 years old. In some of these countries, 2 year olds are also using these services with similar frequencies.

An increased demand for childcare services responds, in part, to the changing demographics of Latin American families, characterised by a rise in urbanisation, fewer extended families, and an increase in women's participation in labour markets. Between 1999 and 2014, female labour force participation rose from 58% to 65% in Latin America (Duryea and Robles, 2016). This change can be seen across all education groups, and also among women with children younger than 5 years of age (Berlinski and Schady, 2015).

What is high-quality childcare?

There is an ample literature on what are the key elements of good-quality childcare. The experts usually distinguish between structural elements of quality and process quality. Structural quality relates to the infrastructure, the availability of materials, the qualification of the personnel in charge of children, and the caregiver-to-child ratios. Process quality focuses on the nature of interactions between caregivers and children. For young children, high-quality interactions need to be frequent, responsive to their interests, rich in language, warm, and sensitive to their needs. Structural quality is important to ensure adequate conditions of safety and hygiene. Moreover, structural and process quality are interrelated: for example, in a setting with few caregivers per child, it becomes more difficult to provide frequent, individualised interactions. Research suggests that process quality is crucial for childcare services to attain child development outcomes that can be sustained over time. In other words, process quality is something that should not be compromised on. The evidence available in Latin America is not encouraging, as it suggests extremely low levels of process quality (Berlinski and Schady, 2015).

The association between quality of care and child development

In a recent paper, my colleagues and I explored the relationship between process quality and child development outcomes (Araujo *et al.*, 2017). We looked at data from the largest provider of publicly funded childcare services in urban Peru, the Cuna Más programme. Process quality was measured at the classroom level. We had information on the quality of two classrooms in each of the 291 centres studied. We administered the Toddler Classroom Assessment Scoring System (CLASS) (La Paro *et al.*, 2012), a well-known instrument that has been used in Latin America to measure process quality in the classroom. The focus of the CLASS is adult–child interactions. In addition, we visited the children from these classrooms in their homes, where we administered the problem solving, fine motor, and communication scales of the Ages and Stages Questionnaire, third edition (ASQ-3) (Squires *et al.*, 2009), a screener assessment that has been used in the region in several at-scale studies.

We compared process quality and child development outcomes across classrooms within childcare centres. We found that a child exposed to a classroom with a caregiver who offered one standard deviation higher process quality had development outcomes that were 7% of a standard deviation larger in magnitude. We also found that caregivers with more years of education were not more effective at producing better child development outcomes, but that caregivers with more years of experience were.

'Process quality is crucial for childcare services to attain child development outcomes that can be sustained over time. In other words, process quality is something that should not be compromised on.'

How can programmes promote quality childcare at scale?

- *Do not rush expansions in coverage without a strategy to provide quality services in place.* In many countries of Latin America, the coverage of education services was expanded rapidly without a focus on the quality of these services. This is not a good idea for childcare. The evidence suggests that low-quality childcare services for children younger than 3 are not innocuous. They can in fact have *negative* impacts on child development (Berlinski and Schady, 2015). Therefore, expansion in coverage should be planned side by side with efforts aimed at quality improvement and consolidation.
- *Target well.* A key takeaway from studies of high-quality childcare services with long-term impacts on education and employment is that these services were designed for children from very poor, vulnerable families. While Latin America has developed sophisticated targeting systems for some of its social programmes, these are not always used for publicly subsidised childcare. It is children from the most disadvantaged families who are also the most likely to experience low-quality home environments, poor in stimulation and learning opportunities. It is precisely this group of children who would benefit the most from quality childcare services.

△ *Photo: Courtesy Cuna Más early childhood national programme*

- *Work conditions*. The staff of childcare centres often work in suboptimal conditions. Many programmes do not hold a formal employment relationship with their staff, they do not pay a salary or provide other worker benefits. A sizeable portion of the workforce volunteers their time. Under these conditions, quality and accountability are not possible. Experienced and effective caregivers have every incentive to leave the sector and find better jobs with private sector providers.
- *Mentoring*. Offering care that is characterised by frequent and consistent high-quality adult–child interactions is something that can be learned. Mentoring schemes have been put in place to work individually with caregivers in building these competences. They require qualified mentors, who can engage the caregivers and gain their trust. Mentoring should be at the heart of in-service training strategies of childcare service providers. More research is needed on what are the most effective mechanisms to provide mentoring at scale.

- *Continuous quality improvement.* Social programmes are making use of technology to simplify many operational processes. Continuous quality improvement relies on real-time data that that can trigger consequential actions. Four key elements should be in place for a quality improvement system to work: the definition of specific results to be achieved; agreement on how they will be measured; identification of changes that are required to achieve those results; and a cycle of innovation and continuous learning that adjusts dynamically.
- *Pre-service training.* Latin America is not producing enough early childhood professionals to meet the expanding demands of this sector. There might also be the need to align the skills offered by higher education training programmes with the best practices in the field. High-quality services at scale require an organic coordination with the higher education services in charge of training the workforce of the future.
- *Curricula and early learning guidelines.* Curricula play an instrumental role in achieving process quality. They reflect an agreement around results. They also align the efforts in the areas of training, monitoring and evaluation that are necessary to achieve those results. Curricula help the daily work of caregivers, particularly in low-capacity settings, where they provide structured activities and materials for the children under their care that are age-appropriate and can foster opportunities to learn and explore.
- *Keep the focus on process quality.* Nobody will argue against the need for secure facilities that ensure that young children can be cared for in conditions that ensure their health, their safety, and their well-being. However, the focus of continued quality improvement efforts needs to remain on process aspects of quality. This is not an easy choice because politicians may press for photo opportunities cutting ribbons while inaugurating brand new centres. Thus, technical and academic advisors need to join forces with families, civil society organisations and communities to make sure the focus of quality improvement efforts remains where it matters the most: offering young children day-to-day interactions that are frequent, warm, receptive, rich in language, and sensitive to their needs.

References

Araujo, M.C., Dormal, M. and Schady N. (2017). *Child Care Quality and Child Development*. IDB Working Paper Series IDB-WP-779. February 2017. Washington DC: Inter-American Development Bank. Available at: https://publications.iadb.org/handle/11319/8154 (accessed April 2017).

Berlinski, S. and Schady, N. (eds). (2015). *The Early Years: Child wellbeing and the role of public policy.* New York: Palgrave Macmillan.

Duryea, S. and Robles, M. (2016). Social Pulse in Latin America and the Caribbean 2016: Realities and perspectives. Washington DC: Inter-American Development Bank. Available at: https://publications.iadb.org/handle/11319/7863 (accessed April 2017).

La Paro, K.M., Hamre, B.K., and Pianta, R.C. (2012). *Classroom Assessment Scoring System (CLASS) Manual, Toddler.* Baltimore, MD: Brookes.

Squires, J., Bricker, D., Twombly, E., Nickel, R., Clifford, J. Murphy, K. *et al.* (2009). *Ages & Stages English Questionnaires, Third Edition (ASQ-3): A parent-completed child monitoring system.* Baltimore, MD: Brookes.

Quality standards for early childhood services: examples from South and South East Asia

Sandipan Paul
International Consultant in Early Childhood Care and Education, New Delhi, India

Governments around the world are currently formulating quality standards for early childhood services. When delivery models are multiple and diverse, as is the case across much of South and South East Asia – including publicly funded, private and community-based – defining quality standards is especially crucial. Standards set out clear expectations for what knowledge and skills early childhood workers should have, and how they should go about their work with young children and families. Sometimes they only define minimum conditions; sometimes they lay out pathways for service providers to improve their levels of quality.

In India, for example, the quality standards framework is based on the National Early Childhood Care and Education (ECCE) Policy 2013 (Ministry of Women and Child Development, 2013, 2014). It identifies some non-negotiable minimum standards for crèches, preschools and other early childhood service providers, such as at least one trained adult for every ten children aged under 3, and at least one for every 20 children aged 3–6; an age-appropriate, child-centric curriculum in the children's mother tongue; and availability of child-friendly toilets, safe drinking water and a separate space for preparing meals. However, it also makes clear that these 'non-negotiable' minimum standards are not sufficient for a service to be considered good quality.

Service providers are encouraged to work to meet the indicators specified in the quality standards framework. These indicators are grouped under eight 'standards', each broken down into elements. For example, elements of the first standard – 'interactions' – include children's interactions with their peers, teachers and environment, and staff interaction with families and with each other. Examples of indicators include 'caregivers encourage children to think, reason, question and experiment', and 'children are encouraged to negotiate and resolve conflicts peacefully with adult intervention and guidance where necessary'. Other standards and indicators cover areas such as washing hands before meals, adequate outdoor space, availability of books, record keeping and many others.

The quality standards also propose the establishment of a national registration system for all ECCE service providers, with mandatory registration, evaluation and accreditation. However, at present this remains only a proposal – it has yet to be implemented at national level. Stepping into the gap, some state governments are establishing their own oversight institutions: for example,

Himachal Pradesh proposed a bill in 2017 to set up a body with wide-ranging powers to regulate private provision of playschools, nurseries, crèches and preschools, while Telangana is establishing a state-level council with responsibility for private institutions serving children aged below 6 years of age.

Elsewhere in the region, there are examples of mandatory registration systems in place. The box describes two such systems, in Singapore and the Philippines.

Singapore

The Early Childhood Development Agency (ECDA), set up in 2013, oversees kindergartens – including nurseries and playgroups, for children from age 2 to 7 – and child care centres, which can cater for children as young as 2 months. The agency is multi-sectoral, run jointly by the Ministry of Education and the Ministry of Social and Family Development. Its quality assurance model looks at seven issues: leadership, planning and administration, staff management, resources, curriculum, pedagogy, and health, and hygiene and safety.

It is mandatory for providers to register with the ECDA, and they must show that they meet the baseline requirements of quality to receive a license to operate – a process which involves visits from regulators. Having done so, providers can look at indicators in the ECDA's Quality Rating Scale to see if they would qualify for a certificate from the Singapore Preschool Accreditation Framework – if so, they can apply to be evaluated through a process of classroom observation, interviews and document checks.

Philippines

The Early Years Act of 2013 gives responsibility for overseeing services for the birth to 4 years age group to the Early Childhood Care and Development Council, with the Department of Education taking over once children reach the age of 5. The Council has a high-level, multi-sectoral governing board chaired by the Secretary of Education and including the Secretaries of the Department of Social Welfare and Development and the Department of Health, the Executive Director of the National Nutrition Center, and the President of the Union of Leagues of Local Authorities of the Philippines – along with an expert in the field directly appointed by the President.

Providers of early childhood services have to register via their local municipality six months in advance of opening; a municipal officer then visits the premises to decide whether to issue a license to operate, which is valid for three years. As a next step, providers can apply for 'recognition', which involves a further set of assessments covering quality standards in the areas of health, nutrition and safety; physical environment and safety; interactions; staff qualification and continuing education; curriculum, instruction and assessment; family involvement and community linkages; and leadership, programme management and support.

'Development of quality standards needs to go alongside development of tools for measuring and rating the quality of programmes, learning and caregivers.'

△ *Photo: Jim Holmes/Bernard van Leer Foundation*

Every country has its own context and circumstances, and countries in South and South East Asia are at different stages of developing and implementing standards. Nonetheless, some common lessons already emerge from experiences in the region:

- Standards need to be defined in a way that creates clarity about what a service provider needs to do to achieve them, with a comprehensive and clear set of indicators that can be followed progressively.
- Where standards are mandatory, service providers may need to be provided with time and technical support to meet them. Support may be most effectively provided by sub-national levels of government, such as provincial or district.
- Development of quality standards needs to go alongside development of tools for measuring and rating the quality of programmes, learning and caregivers. Useful resources here include the tools developed by ECDA in Singapore for accreditation; the Early Childhood Quality Assessment Scale developed by the Centre for Early Childhood Education and Development in India; and the World Bank's Systems Approach for Better Education Results.
- Central agencies on early childhood have the potential to provide focused technical guidance on development and implementation of standards, as is the case in both Singapore and the Philippines. Establishing a council at central level ensures a well-coordinated approach to quality assurance.

- While ideally one set of standards would ultimately apply to all service providers, it may initially be necessary to recognise different contexts in the setting of standards. For example, community-based preschools in remote regions of countries such as Lao PDR and Timor-Leste could struggle to meet standards that might be appropriate for publicly funded or private preschools in urban areas.
- Social inclusion must be recognised as an underlying quality dimension that cuts across all the other dimensions.

Ultimately, the successful implementation of the standards will depend on strong legislative frameworks, adequate financial commitments, capacity building of stakeholders in the sector and a strategic collaborative approach involving communities, governments at all relevant levels, civil society, development partners and private sector.

References

Ministry of Women and Child Development, Government of India. (2013). *National Early Childhood Care and Education Policy*. Available at:http://icds-wcd.nic.in/schemes/ECCE/ecce_01102013_eng.pdf (accessed May 2017).

Ministry of Women and Child Development, Government of India. (2014). *Quality Standards for Early Childhood Care and Education (ECCE)*. Available at: http://icds-wcd.nic.in/schemes/ECCE/quality_standards_for_ecce_final_03022014.pdf (accessed May 2017).

The Power of Nutrition: innovative financing for the next generation

Martin Short
Chief Executive Officer

Mavis Owusu-Gyamfi
Head of Investments

The Power of Nutrition, London, UK

What began with two people, an idea and a laptop in a cramped basement office in London has developed in less than two years into a dynamic platform for investment into nutrition programmes in some of the poorest countries in Africa and Asia. By securing commitments from governments and donors to match private donations, The Power of Nutrition is able to incentivise new actors to get involved in this important area.

In recent months, much of the world's attention has been absorbed – rightly – by the humanitarian challenge of feeding people in areas of north Africa affected by famine and acute hunger. Providing food to those who are hungry is of course a vital response, but it is not enough and on its own will not prevent undernutrition. In fact, undernutrition can just as easily exist in a situation of plenty. One senior African official recently described the situation in his own country: 'We have a lot of food, but you might find that places with a lot of food also have a lot of malnutrition.'

The challenge is not so much lack of knowledge – most of the causes of undernutrition are understood and can be treated – as the need for increased investment. The scale of the problem is clear and urgent, and is worth restating. Nearly one in four children under the age of 5 suffers from the development consequences of long-term undernutrition – that is, their growth is stunted – because they have not received the nutrients they need in their first thousand days of life (International Food Policy Research Institute (IFPRI), 2016).

Pause for a minute and think about the implications of this statistic: of every four young children in the world today, one is likely to be less healthy than her peers and to do less well at school; she is destined to earn less and live with the long-term physical and mental impacts of undernutrition. If she becomes pregnant, she is more likely to give birth to a baby which is smaller and weighs less than it should, passing on the damaging effects of undernutrition to a new generation. Today 156 million children have been handed a life sentence of being stunted in their physical and cognitive development.

The long-term costs of poor nutrition are also immense for countries, which can lose up to 11% of GDP. Investing in nutrition is vital if the world – and especially the least developed countries – are to achieve their full potential. But relatively modest investments could reap big results, and quickly. The World Bank has

△ *Photo: Thibaut Monnier (Ayoukit)/Bernard van Leer Foundation*

estimated that for an additional USD 49.5 million, the number of stunted children can be reduced by 40% by 2025 (Shekar *et al.*, 2017).

The need for a new model

For many years, the expected solution to a long-term development challenge such as undernutrition has been for governments in OECD member countries to provide overseas aid. This has certainly had a major impact: the proportion of children who are either undernourished or hungry is substantially less than it was 25 years ago. But progress has not been rapid enough or at a sufficient scale to prevent and begin to roll back the continuing impact of undernutrition.

To achieve that scale, we need to do a much better job of engaging with national governments and the private sector. This has been at the centre of the discussions on undernutrition – including Nutrition for Growth, a partnership between the governments of the United Kingdom, Brazil and Japan that began with a high-level summit in London in 2013 – that culminated in the second Sustainable Development Goal on Ending Hunger, Achieving Food Security and Promotion of Sustainable Agriculture, agreed two years ago.

The Power of Nutrition was born out of a conversation at that summit in 2013, and formally launched in the Spring of 2015 at the World Bank, with support from its partners – the UK Government's Department for International Development (DFID), the Children's Investment Fund Foundation (CIFF), the UBS Optimus Foundation, UNICEF and the World Bank. These partners agreed that a dynamic new platform was needed to generate greater and more strategic involvement from the private sector – including large corporations, private philanthropies, investors and wealthy individuals.

The idea behind The Power of Nutrition is to provide increased incentives for these private investors to pool resources. With generous support from our founders, implementing partners (the World Bank and UNICEF) and governments in countries where we develop programmes, The Power of Nutrition matches each new dollar for nutrition with three additional dollars when they are invested in a country programme to scale-up evidence-based interventions to prevent and treat undernutrition.

We work closely with our implementing partners and with national governments to develop programmes with the maximum potential nutritional impact for children. Each programme supports proven interventions and national plans. As part of our programme negotiation, we also agree monitoring and evaluation plans with detailed and ambitious targets to ensure progress is on track. Combined, this approach enables our investments to have a dramatic impact on the lives of individuals, families, their communities and the economies in which they live and work.

'The challenge is not so much lack of knowledge - most of the causes of undernutrition are understood and can be treated – as the need for increased investment.'

The story so far

In just two years, The Power of Nutrition has so far developed and started funding programmes worth close to USD 100 million, bringing in substantial new investments from philanthropies and the private sector. Our programmes are in countries with the highest levels of undernutrition, in Africa and Asia. Already, we have programmes funded in Tanzania and Ethiopia (through the World Bank) and Liberia (through UNICEF), with other potential country programmes being explored in Benin, Madagascar and India.

In Tanzania and Ethiopia, the focus is on strengthening the health system to be able to support improved nutrition for those most at risk, for example by ensuring women and children have access to micronutrients, and training health workers in the most effective techniques to educate women about the need to exclusively breastfeed babies for the first six months of life, followed by introduction of nutritious complementary food to promote healthy mental and physical development of their children.

In Liberia, the focus is on support for rebuilding the health system, and trust in the system, following the immense damage done by the recent Ebola epidemic, including critical nutrition interventions for women of reproductive age and for

children. The programme provides technical support to health workers to help them deliver nutrition interventions as part of their community health work and outreach.

Since The Power of Nutrition was created, we have learned important lessons on how to build partnerships by engaging with national governments and speaking the language of the private sector – because, if we see the private sector as a partner, we must be clear about what is in it for them. The challenge now is to ensure that scale and quality advance together, and that we are able to show continued progress and clear evidence to keep nutrition high on the list of global priorities.

References

International Food Policy Research Institute (IFPRI). (2016). *From Promise to Impact: Ending malnutrition by 2030,* Global Nutrition Report 2016. Washington DC: IFPRI.

Shekar, M., Kakietek, J., Dayton Eberwein, J. and Walters, D. (2017). *An Investment Framework for Nutrition: Reaching the Global Targets for Stunting, Anemia, Breastfeeding and Wasting.* Washington DC: World Bank Group.

Better policies for improved financing of services for young children

Arjun Upadhyay
Program Officer, Results for Development Institute, Washington DC, USA

Vidya Putcha
Program Officer, Results for Development Institute, Washington DC, USA

Inadequate financing of early childhood education and other services for young children and their families creates challenges in low- and middle-income countries. How could improved policies mitigate these challenges? In 2016, the Results for Development Institute carried out research on this question for a background paper submitted to the International Commission on Financing Global Education Opportunity, also known as the Education Commission (Results for Development Institute, 2016).[1]

Globally, the evidence demonstrating the importance of investing in early childhood programmes is strong. Robust research shows that such investments result in fewer dropouts and higher learning achievement, and are associated with stronger economic growth (Dickens *et al.*, 2006; Gertler *et al.*, 2014). Returns on investment in young children are greater than at any other time in human development (Heckman, 2007). Despite these benefits, existing financing for early childhood development services falls severely short of providing high-quality services for all children.

While countries across income levels under-invest in early childhood services, the challenge is particularly acute in low- and middle-income countries. While developed countries spent on average 0.5% of gross national product on pre-primary education in 2012, developing countries spent merely 0.07% of gross national product (UNESCO, 2015).

In light of the enormous gaps in available financing, which affect the education sector more broadly, the Education Commission was convened to reinvigorate the case for investing in education and make recommendations for governments and international actors on how to increase investments. The Commission's recent report underscored the importance of investments in young children, recommending that governments provide fee-free education for two years at the pre-primary level and through secondary education and, in particular, allocate public funding to lower levels of the education ladder (International Commission on Financing Global Education Opportunity, 2016).

While the Commission's recommendations are good news for young children and their families, a number of complex factors limit the financing available to make these recommendations a reality. They include lack of overall fiscal space, poor coordination among sectors during budget development, and being

1 This background paper, on which this article is based, was written by a team including the authors of this article and Michelle Neuman, Minju Choi, and Joan Lombardi.

crowded out by investments in older children and adults. Endogenous to these challenges, though, are the often poorly developed and implemented policies that guide early childhood finance, which often further undercut already low resource mobilisation (Results for Development, 2016).

Barriers to effective financing policy

Policies, including those guiding the budget cycle, can be difficult to interpret and often do not capture programme needs and objectives. In India, for example, the Integrated Child Development Scheme (ICDS) does not reach all children in all states as budgets are usually based on the number of existing beneficiaries, rather than the overall size of the target population. Although states have the scope to propose budgets based on targets, cumbersome budget templates often cause calculation errors and hinder states from accurately budgeting for targets (Directorate of Social Welfare and Social Education, 2012; Ministry of Women and Child Development, 2014). This leaves states with insufficient funds to expand to reach more children and families, even though this is an explicit objective of the programme. Furthermore, due to the multi-sectoral nature of early childhood development, unclear policies delineating responsibilities among varying ministries within a country can generate overlap and lead to inefficiencies in the allocation and utilisation of resources.

In recent years, many governments have decentralised responsibility for financing and delivery of early childhood services. However, in many contexts, this policy change has not been accompanied by clear guarantees that lower levels of government will have the support and adequate resources to follow through on that responsibility. For example, Kenya's Constitution of 2010 declared free and compulsory pre-primary education to be a right, with counties responsible for the delivery of the service. While this devolution of authority has given counties the space to explore different approaches to providing pre-primary education, the central government has not allocated any specific budget to counties for relevant programmes. This lack of dedicated resource support from the central government has challenged counties with limited resources to follow through on their responsibility to deliver pre-primary education, while also threatening to increase disparities between counties (Devercelli and Sayre, 2016).

'Policies that do not ensure monitoring mechanisms that support accountability generate challenges for programme delivery.'

Policies that do not ensure monitoring mechanisms that support accountability generate challenges for programme delivery. For example, in Malawi, a community-based management system calls for communities to be involved in decision-making, particularly around procurement of materials for the operation of community-based childcare centres. However, in the absence of accountability mechanisms district assemblies fail to involve local communities, and procure materials without involving them (Ministry of Gender, Children and Social Welfare, 2016).

△ *Photo: Jon Spaull/Bernard van Leer Foundation*

Principles for improved early childhood development finance policy

While the trade-offs that governments face around allocating limited resources may be slow to change, improving policies that guide financing for early childhood services could mitigate some of the challenges experienced in low- and middle-income countries. The following are a few considerations for governments as they think about ways to improve the policies that guide financing.

Streamline the budget process and base budgets on clear criteria that relate to need. To meet current and future requirements, budgets for early childhood services should be developed using clear targets and corresponding unit cost

estimates for all eligible participants, rather than only enough to cater for the service's existing beneficiaries. In Indonesia for example, central-level budgets use explicit criteria to determine spending: the government considers the number of children to be served by schools, school construction or renovation projects, and any other education materials required (Denboba *et al.*, 2015).

Coordinate policy planning, including budgeting, among departments and providers. Early childhood development programmes include a number of services in the education, health, nutrition, social protection, child protection, and water, sanitation, and hygiene (WASH) sectors. In most countries, multiple agencies and actors are involved in funding and financing these programmes. In Chile, the Ministry of Social Development takes on the role of coordinating the entire Chile Crece Contigo system, which has minimised coordination challenges across the various sectors (Castillo, 2014). Multi-sectoral policy planning should be encouraged at the top levels of government to assure efficiency, coordination, accountability, and alignment across financing streams.

When decentralising, policies should outline a gradual phase in/out of federal financial support and provide guidance to lower levels of government on how to use funds. When countries devolve services to sub-national governments, the federal government should ensure adequate financial support is still provided to local governments. In Brazil, municipalities, who are responsible for crèches and preschools, pay into state-level funds which are then redistributed based on the number of enrolled students. The federal government supplements the funds to ensure a minimum level of funding per child enrolled (Evans and Kosec, 2012). In South Africa, support was provided by the central government in phases as financing for Grade R became the responsibility of provincial governments (Biersteker, 2010). Decentralisation can also stretch the capacity of local governments who may not be as experienced in implementing large-scale programmes for young children. In Indonesia, for example, communities were better able to utilise funds from block grants for early childhood when they were given some guidance on how to use the funds (Sardjunani *et al.*, 2006).

'In recent years, many governments have decentralised responsibility for financing and delivery of early childhood services.'

Create mechanisms for accountability. When responsibilities are shared among different levels of government and community actors, there is a need for stronger accountability mechanisms. Policies crafted via multi-stakeholder consultations that require service providers to track and report funding flows are one potential mechanism to improve accountability. For example, in an effort to promote accountability, local government units in the Philippines are required to document in detail how funds are used for child development centres (Republic of the Philippines Commission on Audit, 2015). In Chile, municipalities sign framework agreements with central authorities which create accountability for usage of funds (Berlinski and Schady, 2015). Results-based financing approaches can also improve accountability. For example, in Peru, a results-based budgeting approach, whereby the distribution of resources is tied

to the achievement of certain targets or outcomes, is used to finance Cuna Más, a nationally scaled-up childcare and home visiting programme (MEF, MIMP, MIDIS, MCLCP and UNICEF, 2014).

While changing the landscape for early childhood development financing is a long-term endeavour, the Education Commission's call to countries and international actors to increase investments in early childhood is a major win for young children and families. However, as countries and international actors look to increase their financial commitments, governments should not forget to focus efforts on improving policies so that they enhance and do not undercut available resources for programme implementation.

References

Berlinski, S. and Schady, N. (2015). *The Early Years: Child well-being and the role of public policy.* Washington DC: Inter-American Development Bank.

Biersteker, L. (2010). *Scaling-up Early Child Development in South Africa: Introducing a Reception Year (Grade R) for children aged five years as the first year of schooling*, Wolfensohn Center for Development Working paper. Available at: http://www.brookings.edu/research/papers/2010/04/child-development-south-africa- biersteker (accessed April 2017).

Castillo, C. (2014). Comprehensive protection system for early childhood, *Chile Crece Contigo* (Chile Grows With You): the Chilean experience. Implementation and evaluation. Presentation at the International Conference on Human Development Measurement Methods and Evaluation Approaches Focused on Equity in Favor of the New Generations, Rabat, 5 June. Available at: http://www.ondh.ma/sites/default/files/2_chili_social_protection_children.pdf (accessed April 2017).

Denboba, A.D., Hasan, A. and Wodon, Q.T. (eds). (2015). *Early Childhood Education and Development in Indonesia: An assessment of policies using SABER*, World Bank study. Washington DC: World Bank. Available at: http://documents.worldbank.org/curated/en/131441468189570749/Early-childhood-education-and-development-in-Indonesia-an-assessment-of-policies-using-SABER (accessed April 2017).

Devercelli, A. and Sayre, R. (2016). *Scaling up Preschool in Kenya: Costs, constraints, and opportunities*, Policy Brief. Washington DC: World Bank.

Dickens, W., Sawhill, I. and Tebbs, J. (2006). *The Effect of Investing in Early Education on Economic Growth,* Policy Brief No. 153. Washington DC: Brookings Institution.

Directorate of Social Welfare and Social Education, Government of Tripura. (2012). Integrated Child Development Services Scheme: State Annual Programme Implementation Plans (APIPs) 2012–13. Available at: http://icds-wcd.nic.in/icds/apip/APIP-2012-13%20%28Tripura%29.pdf (accessed April 2017).

Evans, D.E. and Kosec, K. (2012). *Early Child Education: Making programs work for Brazil's most important generation.* Washington DC: World Bank.

Gertler, P., Heckman, J., Pinto, R., Zanolini, A., Vermeerch, C., Walker, S. *et al.* (2014). Labor market returns to an early childhood stimulation intervention in Jamaica, *Science* 344(6187): 998–1001.

Heckman, J.J. (2007). *The Productivity Argument for Investing in young Children*, Working Paper No. 13016. Cambridge, MA: National Bureau of Economic Research.

International Commission on Financing Global Education Opportunity. (2016). *The Learning Generation: Investing in education for a changing world.* Washington DC: Education Commission. Available at: http://report.educationcommission.org/report/ (accessed April 2017).

MEF, MIMP, MIDIS, MCLCP and UNICEF. (2014). Public spending on children and adolescents, *Investing in Children in Peru: A methodology and monitoring framework.* Lima: UNICEF.

Ministry of Gender, Children, and Social Welfare. (2016). Interview with government official.

Ministry of Women and Child Development, Government of India. (2014). Annual Proposal Implementation Plan. Available at: http://icds-wcd.nic.in/icds/icdsimg/icds081214.pdf (accessed April 2017).

Republic of the Philippines Commission on Audit. (2015). *Early Childhood Care and Development Council Observations and Recommendations.* Quezon: Commission on Audit.

Results for Development Institute. (2016). *Financing Early Childhood Development: An analysis of international and domestic sources in low- and middle-income countries*, background paper, The Learning Generation. Washington DC: Education Commission. Available at: http://www.resultsfordevelopment.org/sites/resultsfordevelopment.org/files/resources/Financing-ECD-Volume-I.pdf (accessed April 2017).

Sardjunani, N., Suryadi, A. and Dunkelberg, E. (2006). Indonesia: public financing of block grants for privately delivered services. In: Young, M.E. and Richardson, L. (eds) *Early Childhood Development, from Measurement to Action.* Washington DC: World Bank.

UNESCO. (2015). *Education for All Global Monitoring Report*, Statistical Tables. Available at: http://en.unesco.org/gem-report/node/6 (accessed April 2017).

The international Guide for Monitoring Child Development: enabling individualised interventions

İlgi Öztürk Ertem
Professor of Developmental Paediatrics, Ankara University School of Medicine, Ankara, Turkey

A millennium ago, Avicenna, the father of modern medicine, wrote that difficulties in infancy influence psychology and temperament, and hence adult moral and ethical development (Al-Naqib, 1993). Since then, we have learned vast information about early childhood development from diverse scientific fields including medicine, psychology, neuroscience and economics. We now know that optimal support in early childhood is essential to build human health and capacity across the lifespan, and to build the wealth of nations (Silver and Singer, 2014). Despite the evidence, 43% of children under age 5 in low- and middle-income countries (LMICs) are estimated to be at risk of not reaching their developmental potential (Black *et al.*, 2017).

Recently, high-profile calls have stressed the need for worldwide dissemination of early childhood development interventions, preventing nutritional deficiencies and providing nurturing, responsive, stimulating care to children (Richter *et al.*, 2017; Britto *et al.*, 2017). Such universal preventive strategies are crucial. It is also important not to overlook the disparity in how children in high-income countries (HICs) and LMICs receive developmental care. To date, interventions in LMICs have used blanket, non-individualised, generic approaches that are far from the comprehensive, individualised interventions for children in HICs (Dworkin, 1989; Ertem, 2012; Britto *et al.*, 2017).

How can the development of all children best be supported, and how can their specific needs be identified and addressed in early childhood? The Guide for Monitoring Child Development is a promising approach to answering these questions.

Screening, surveillance and monitoring

Terminology is significant here, in a way that is not widely appreciated. In child development interventions, 'monitoring' is often used interchangeably with developmental 'screening' and 'surveillance' – but the different connotations of the words imply different underlying philosophies. A 'screen' is used to keep out something undesirable, and 'screening' is a term borrowed from medicine: it implies looking for the presence of a disease or other unwanted condition. Surveillance, meanwhile, is a term more associated with security and policing – it, too, implies looking for something that has gone wrong, or is about to go wrong.

△ *Photo: Jon Spaull/Bernard van Leer Foundation*

However, when we attempt to support children in reaching their developmental potential, our philosophy is not limited to looking for children that are failing a screening test at a given time point. Child development is a dynamic process and there is no set time when interventions may be needed. Most interventions should be instituted before a child is failing a screening test. Therefore, when attempting to optimise the development of children, our primary goal is to partner with caregivers so that we can help them maximise the development of their children.

We choose to use the term 'monitoring' child development because it means 'to watch, keep track of, or check, usually for a special purpose' and implies an accepting, humble, positive and hopeful stance. The premise of monitoring is to keep track of and support children's development above and beyond a predetermined goal to find an aberration (Ertem, 2012). Monitoring enables knowing the child's and family's strengths and vulnerabilities over time; watching, enjoying and supporting the child's development with the family, while also partnering to enhance strengths, address risk factors, and provide additional support and specialised services when needed.

Research from HICs has shown that developmental monitoring benefits all children – those at risk of developmental difficulties can be identified at an early stage and interventions made, while those who are developing on track benefit as the monitoring reassures their caregivers and provides them with advice where needed on helping their children to fulfil their potential (Dworkin, 1989; Blair and Hall, 2006; Committee on Practice and Ambulatory Medicine and Bright Futures Periodicity Schedule Workgroup, 2016).

'Child development is a dynamic process and there is no set time when interventions may be needed.'

Emphasis on screening children for developmental delays can be especially inappropriate where there are not adequate resources to address those delays. The support available to children and caregivers, particularly in LMICs, may be uneven and shaped by local circumstances, so it is important for developmental monitoring approaches to give flexibility to tailor interventions.

Furthermore, caregivers in LMICs may be less well informed about children's development and may be more concerned about stigma than those in HICs. Tools that ask caregivers about their concerns or that pose questions resulting in 'yes' or 'no' answers may not yield accurate profiles of how children are functioning. Low literacy levels among caregivers can limit the usefulness of written questionnaires. For many service providers in LMICs, addressing early childhood development is a new concept that requires additional training (Ertem, 2012).

The GMCD – a comprehensive package to optimise child development

The international Guide for Monitoring Child Development (GMCD) (Ertem *et al.*, 2006, 2008, 2009, 2017), originally developed in Turkey through over 20 years of research, is a comprehensive package based on bioecological theory (Bronfenbrenner and Ceci, 1994) and family-centred care (Brewer *et al.*, 1989). The GMCD embraces the idea that child development is a spectrum, ranging from optimal development to severe developmental difficulty. It seeks to avoid labelling children, instead acknowledging our current understanding of multiple strengths and vulnerabilities in the child, the caregiving environment and the community that contribute to child development.

The GMCD recognises that the philosophy behind early intervention has shifted from dictating what caregivers should do, to learning about and reinforcing families' own knowledge and expertise (Shonkoff and Meisels, 2000). Developmental assessment philosophy has shifted from testing children and relying on scores, to obtaining a comprehensive understanding of children's functioning and environment (Meisels and Fenichel, 1996). Rather than a service provider testing a child while the caregiver watches, the GMCD involves a service provider asking the caregiver open-ended questions about the child's development.

'The premise of monitoring is to keep track of and support children's development above and beyond a predetermined goal to find an aberration.'

Open-ended questions are the gold-standard technique of history taking to build interpersonal rapport. Examples of such questions are: 'How does she let you know when she wants something?'; 'Tell me examples of what she can understand when you talk to her' and 'I'd like to learn about her play, can you give me examples of how she plays?'. From the caregiver's spontaneous replies, the provider discerns which specific standardised, pre-coded milestones the child has attained. If the caregiver's response is not sufficient to allow this to be deduced, additional probing questions are used. The GMCD is intended to monitor children from birth to 3.5 years of age, and assesses seven functional domains: expressive and receptive language, gross and fine motor skills, relating, play and self-help.

The monitoring component is only the first part of the package – it flows seamlessly into the 'support' component, using information on where the child and family are and what should be supported. This individualises and expands generic interventions such as the WHO/UNICEF's Care for Child Development (2012). There is also an 'early intervention' component, which simplifies the WHO International Classification of Functioning, Disability and Health framework (2001) to apply family-centred, community-based early intervention for children with special needs. As both an assessment and an intervention, the GMCD incorporates strengths-based, family-centred approaches – comprehensive information about the child and the family is obtained, and interventions are specific to the child and family.

A large-scale study funded by the National Institute of Health (NIH) standardised and validated the GMCD on approximately 12,000 children in four diverse countries – Argentina, India, South Africa and Turkey (Ertem *et al.*, 2017). This study showed that healthy children attain GMCD milestones at similar ages. This means the GMCD should be equally applicable in these and other countries. Indeed, it is one of the few tools with adequate psychometric and feasibility criteria to be used low- and middle-income settings (Fischer *et al.*, 2014).

Scaling-up the GMCD

Community workers, nurses, family physicians, paediatricians, and early intervention providers in 25 countries have been trained in using the GMCD, and training of trainers has been completed in seven countries (Kraus de Camargo, 2016). The GMCD implementation differs across settings. For example, in Azerbaijan and Turkmenistan – where services are centralised – it is being incorporated into the pre-service training of health providers and the national child health monitoring system. In India and Guatemala, not-for profit organisations are working to incorporate it into community home visiting programmes. Training lasts from one to three days depending on the background of the trainees and includes prevention, early identification, interpretation of findings with caregivers, and individualised intervention planning (Wertlieb and Krishnamurthy, 2015).

The GMCD enables providers to monitor and support children's development, support caregivers in providing nurturing, responsive stimulation, identify and address health and psychosocial risk factors, and apply community-based early interventions. Its brevity and user- and receiver-friendliness make the GMCD feasible in home visits, health clinics, crèches or other settings. Nonetheless, further research is still needed to examine the effectiveness of GMCD implementation in building capacity in LMICs to address early childhood development.

References

Al-Naqib, A. (1993). Avicenna. *Prospects* XXIII (1/2): 53–69. Available at: http://unesdoc.unesco.org/images/0009/000985/098500eo.pdf (accessed May 2017).

Black, M.M., Walker, S.P., Fernald, L.C., Andersen, C.T., DiGirolamo, A.M., Lu, C. *et al.,* for the *Lancet* Early Childhood Development Series Steering Committee. (2017). Early childhood development coming of age: science through the life course. *The Lancet* 389: 77–90.

Blair, M. and Hall, D. (2006). From health surveillance to health promotion: the changing focus in preventive children's services. *Archives of Disease in Childhood* 91: 730–5.

Brewer, E.J. Jr, McPherson, M., Magrab, P.R. and Hutchins, V.L. (1989). Family-centered, community-based, coordinated care for children with special health care needs. *Pediatrics* 83(6): 1055–60.

Britto, P.R., Lye, S.J., Proulx, K., Yousafzai, A.K., Matthews, S.G., Vaivada, T. *et al*., for the *Lancet* Early Childhood Development Series Steering Committee. (2017). Nurturing care: promoting early childhood development. *The Lancet* 389: 91–102.

Bronfenbrenner, U. and Ceci, S.J. (1994). Nature–nurture reconceptualized in developmental perspective: a bioecological model. *Psychological Review* 101: 568–86.

Committee on Practice and Ambulatory Medicine and Bright Futures Periodicity Schedule Workgroup. (2016). 2016 recommendations for preventive pediatric health care. *Pediatrics* 137: 1–3.

Dworkin, P.H. (1989). British and American recommendations for developmental monitoring: the role of surveillance. *Pediatrics* 84: 1000–10.

Ertem, I.O. (2012). *Developmental Difficulties in Early Childhood: Prevention, early identification, assessment and intervention in low- and middle-income countries: A review.* Geneva: World Health Organization.

Ertem, I.O., Atay, G, Bingöler, B.E, Doğan D.G., Bayhan, A. and Sarica, D. (2006). Promoting child development at sick-child visits: a controlled trial. *Pediatrics* 118: e124–31.

Ertem, I.O., Doğan, D.G., Gök, C.G., Kizilates, S.U., Caliskan, A., Atay, G. *et al.* (2008). A guide for monitoring child development in low- and middle-income countries. *Pediatrics* 121: e581–9.

Ertem, I., Krishnamurthy, K., Mulaudzi, M., Sguassero, Y., Balta, H., Gulumser, O. *et al.* (2017, under review). The international Guide for Monitoring Child Development: standardization and accuracy.

Ertem, I.O., Pekcici, E.B., Gök, C.G., Ozbaş, S., Özcebe, H. and Beyazova, U. (2009). Addressing early childhood development in primary health care: experience from a middle-income country. *Journal of Developmental and Behavioral Pediatrics* 30: 319–26.

Fischer, V.J., Morris, J. and Martines, J. (2014). Developmental screening tools: feasibility of use at primary healthcare level in low- and middle-income settings. *Journal of Health Population and Nutrition* 32: 314–26.

Kraus de Camargo, O.A. (2016). Children are the future – their development matters: report. *Brazilian Journal of Medicine and Human Health* 1: 29–32.

Meisels, S.J. and Fenichel, E.S. (eds). (1996). *New Visions for the Developmental Assessment of Infants and Young Children.* Washington DC: Zero to Three/National Center for Infants, Toddlers and Families.

Richter, L.M., Daelmans, B., Lombardi, J., Heymann, J., Lopez Boo,F., Jere R Behrman, J.R. *et al*., with Paper 3 Working Group and the *Lancet* Early Childhood Development Series Steering Committee. (2017). Investing in the foundation of sustainable development: pathways to scale up for early childhood development. *The Lancet* 389: 103–18.

Shonkoff, J. and Meisels, S. (eds). (2000). *Handbook of Early Childhood Intervention* (2nd edn). New York: Cambridge University Press.

Silver, K.L. and Singer, P.A. (2014). A focus on child development. *Science* 345: 121.

Wertlieb, D. and Krishnamurthy, V. (2015). Special needs, special rights: addressing young children with disabilities via inclusive early childhood development. *Early Childhood Matters* 124: 59–65

World Health Organization. (2001). *The International Classification of Functioning, Disability and Health (ICF).* Geneva: WHO.

World Health Organization/UNICEF. (2012). *Care for Child Development: Improving the care for young children.* Geneva: World Health Organization.

Building national early childhood data systems: laying the groundwork for equitable, quality early childhood services

Abbie Raikes
Assistant Professor, University of Nebraska, Omaha NE, USA

Ivelina Borisova
Education Specialist, UNICEF, New York, USA

Investments in early childhood development have increased in many countries over the last decade, and with investment comes an interest in measuring progress. Data on early childhood development – such as quality of services, or estimates of the health and nutrition status of young children – are crucial to inform policy developments and reforms and improve ongoing programmes. Data are also a key element of accountability: as part of the Sustainable Development Goals (SDGs), countries are required to submit annual reports on indicators relevant to early childhood development.

However, several elements of early childhood development create challenges in building effective data systems. Because it is best understood in a holistic framework, data systems need to cut across multiple sectors, such as health, nutrition, child and social protection, and education. We need to ensure that relevant early childhood indicators are integrated within sectoral information and data systems, and coordinating between these data systems is critical to build a comprehensive national snapshot of the situation of young children.

Even with the best data systems in place, it can be challenging to use data to directly inform policy and practice; the data that are well suited for monitoring at a population level, for example, may not be especially useful at a practice level. With limited funding available for early childhood overall, investments in data must be balanced against investments in other areas, such as professional development and direct support for programmes. Finally, more emphasis has been placed so far on developing tools to collect data than on using those data to make improvements.

Despite these challenges, there is notable progress, with increased consideration of how data systems can be designed and the willingness of several countries to prioritise investments in early childhood data and measurement. One reflection of this forward movement is the Early Childhood Development Action Network (ECDAN), described on pages 93–97 of this issue of *Early Childhood Matters*. Among the task forces set up by ECDAN was one on data, measurement and accountability. The work of this task force has so far led to several observations:

- *There is growing demand for population-level data on early childhood development*. A range of low-, middle- and high-income countries have initiated population-level measurement through various global, regional and national tools. Global tools, designed to produce internationally comparable data, include the Multiple Indicator Cluster Survey Early Childhood Development Index (MICS ECDI), a household-based assessment relying on caregiver report and the Early Development Instrument (EDI), a teacher survey of individual children's development; regional tools, designed to produce regionally comparable data, include the East Asia Pacific Child Development Scales; and national tools, used primarily at the national level, include the Measuring Early Learning and Quality Outcomes tools.[1] More and more countries are choosing to collect data on child development, although not all countries are yet doing so routinely. A next step is to build monitoring systems to routinely and comprehensively collect data on multiple aspects of child development.
- *Maximum impact on policy and practice requires a mix of tools*. For example, global monitoring data will reveal patterns of equity within and across countries; national-level data may be able to provide a more comprehensive set of indicators specific to national policies. Formative data can be effective at the classroom level, by providing teachers with information on individual children. Clarity on the priorities for data, as well as the purpose and limitations of each type of data, is a key building block for an effective data system.
- *Complementary data are needed, such as on families, caregivers and learning environments*. Emphasis is often placed on measuring child outcomes, without explicit connection to the other factors that influence children's development. Data on children's outcomes can be more impactful and actionable when coupled with more complete information on children's experiences, within and outside the home. For example, information on caregivers, including but not limited to parents, is often not available, despite the clear role that caregivers play in supporting young children's development.
- *Measurement strategies should reflect cultural priorities and practices*. Multiple viewpoints need to be engaged on what should be measured and how the data should be utilised. This is especially important when indicators are being considered for regular monitoring within and across sectors. For example, countries can begin the process of improving the strength of their data systems by convening groups of stakeholders to take stock of what data are currently being collected, discuss priorities for additional measurement, and generate recommendations for modifying content of tools as required.

'Data systems need to cut across multiple sectors, such as health, nutrition, child and social protection, and education.'

Towards coordinated and comprehensive systems

The SDGs offer an opportunity to build on the momentum and interest in measuring child development to move in the direction of data systems that include a broader and more comprehensive view of early childhood development. Creating a holistic picture of children's development requires

1 These are just some of the tools; a comprehensive list will be available online.

△ *Photo: Courtesy Asociación Red INNOVA*

integrated data systems that pull key indicators from a range of sectors. Few countries, including high-income countries, have the type of coordinated and comprehensive systems needed to fully embody this vision. The ECDAN task force proposed a series of actions to support countries in building such systems, including the creation of an 'early childhood indicator framework' that can be used as a blueprint for countries considering a coordinated data system.

Data quality is a related area of emphasis – while it is critical to collect more data, it is equally important to ensure that the data are of good quality and are representative of the early childhood development service landscape. Many national systems have struggled to keep up with the diversity of service provision over recent years, so national data systems mainly capture information related to public services. Data are rarely disaggregated by residence, income or ethnicity. Household surveys such as MICS can provide a picture of children and families that is richer than administrative data, which provide more detail on service provision but less on the characteristics of children and families who participate.

There is a need to develop an integrated information system for children that describes provision, coverage participation, quality and equity in early childhood services. Accurate reporting of equity is achieved by ensuring representation from all groups of children and families, especially for those children and families who are under-represented in many existing household surveys because of geographical or cultural isolation.

Varied experiences in countries at all income levels offer lessons for others. For example:

- In the **USA**, the Department of Education and the Department of Health and Human Services (2016) have worked together to support states in implementing early childhood data systems. Key lessons from several years of work to implement integrated data systems include the importance of beginning with standards to guide development of measures; clear data governance policies that will protect the rights of children and families; and ongoing efforts to build capacity as data systems are put into place.
- In **Peru**, the Ministry of Education will soon begin collecting population-level data on early childhood development and the quality of pre-primary learning environments. Pilot data revealed notable gaps between adopted standards for pre-primary environments and actual practice in many classrooms. The data are used to inform teacher training and the creation of an ongoing monitoring tool to track progress towards full implementation of standards.
- In **Azerbaijan**, data systems have struggled to keep up with the diversity of provision of early childhood education services over recent years. There are a variety of providers in Azerbaijan – public, private, NGO, and many different kinds of programme configurations such as public kindergartens that reach children aged from birth to 6 years, preschools that reach children aged 3–6 years, full-day and half-day programmes, and short-term school readiness classes. These providers do not all fall under the responsibility of the Ministry of Education, the usual custodian of the Education Management Information System, and thus the national data system mainly captures information related to public kindergartens. The country is taking a close look at the available data and is developing an integrated information system for children that describes provision, coverage, participation, quality and equity in early childhood education.
- In **Tanzania**, the Ministry of Education has created locally relevant tools to measure child development and the quality of learning environments, to inform the scale-up of the recently adopted pre-primary curricula standards. Tanzania is also looking at ways to support formative assessment in pre-primary classrooms, and is revisiting its learning assessment system to ensure it is efficient in providing national learning data at the right times.

'Even with the best data systems in place, it can be challenging to use data to directly inform policy and practice.'

Many countries begin with improving one aspect of the data system, and then build outwards to include more integrated approaches. Azerbaijan, for example, started by exploring how best to improve and coordinate data across early childhood education services under the education sector, but also kept an eye on replicating this process across other sectors. In Peru and Tanzania, efforts do

not yet include the creation of holistic data systems; however, the measurement of child outcomes may serve as a starting point for a more comprehensive early childhood data system in the future. The experience in the USA demonstrates both the cost and the time commitment required to build integrated data systems, and also offers important examples of how such systems can be built.

As attention turns towards the implementation of effective early childhood programmes and policies, emphasis on data and measurement is required, both to inform implementation and to track progress towards goals.

Reference

US Department of Education and the Department of Health and Human Services. (2016). *The Integration of Early Childhood Data.* Washington DC: US Department of Education and Department of Health and Human Services. Available at: https://www.acf.hhs.gov/sites/default/files/ecd/intergration_of_early_childhood_data_final.pdf (accessed April 2017).

The Early Childhood Development Action Network: a global network to strengthen support for young children

Lucy Bassett
Education Specialist, World Bank, Washington DC, USA

Ana Nieto
Early Childhood Development Specialist, UNICEF, New York, USA

Mark this year in history as the one when a new global network committed to comprehensive early childhood development *action* is taking off! The Early Childhood Development Action Network (ECDAN[1]) is a global partnership committed to the proposition that all young children, anywhere in the world, in any circumstances, should achieve their developmental potential.

The time is ripe for this endeavour. There have been remarkable advances in global evidence on the kinds of interventions – nurturing care[2], early stimulation, and protection from toxic stress – that can help children reach their full potential. And the global Sustainable Development Goals (SDGs) include early childhood development as part of the 2030 transformative agenda. SDG targets under health, nutrition, education, poverty, violence, and clean water and sanitation goals all contribute to better child development outcomes (The Global Goals for Sustainable Development, online).

However, despite the evidence and global attention generated in recent years, an estimated 250 million children under 5 in low- and middle-income countries are at risk of failing to achieve their potential because of adversity during their early, formative years. This affects their brain development, causing lasting damage and contributing to the inter-generational cycle of poverty and lasting inequity. This gap in human potential is partially due to shortfalls in the application of emerging scientific knowledge to shape young children's development, as well as a failure to take action at scale, using a multi-sector approach (Black *et al.*, 2016). What's more, while there are several players advocating for young children, their voices and advocacy are fragmented.

It is urgent to scale-up equitable and high-quality programmes across sectors to provide young children with the opportunity to develop to their full potential and lead happy and productive lives. Political commitment, financial investment, coordinated work across stakeholders, and broader understanding of the importance of the early years of a child's life are all crucial. ECDAN will work, through countries and partners, to move the needle on these issues.

1 There are ongoing discussions about the name of the network and the name will change soon.

2 Nurturing care is defined as a stable environment that is sensitive to children's health and nutritional needs, with protection against threats; opportunities for early learning; and interactions that are responsive, emotionally supportive and developmentally stimulating (Britto *et al.*, 2016).

A push for coordinated and accelerated action on early childhood development

To address these challenges and opportunities for young children, ECDAN forms a network of actors to catalyse action to improve the lives of young children. UNICEF and the World Bank Group launched the initiative at the flagship World Bank Spring Meetings event, 'Smart Beginnings for Economies on the Rise', in April 2016, marking a milestone moment for young children.[3] But ECDAN really came to life when a large number of organisations became active participants, making it a real network. So far United Nations agencies (ILO, UNESCO, UNICEF, and WHO), the World Bank, civil society organisations and non-governmental organisations, foundations, the private sector, regional early childhood networks, academics, think tanks, and related global initiatives, have been engaged. An Interim Executive Group comprising representatives of the different ECDAN stakeholders[4] was set up to develop a blueprint for ECDAN. Soon the essential remaining constituents and countries will join.

Why a network?

ECDAN is not a single entity, but rather a system of interconnected actors and partners working in coordination for a common cause. The participation of this range of actors is critical to translate the existing strong evidence base into action, and to achieve improved child outcomes. This translation is complex and varies by country. To do this, ECDAN will engage a broad range of stakeholders across constituencies, sectors, and levels of government. It will also prioritise the sharing of tools, resources, and actionable knowledge.

In addition, this initiative seeks to complement and work closely with related global partnerships and strategies such as Scaling Up Nutrition (SUN), Global Partnership for Education (GPE), End Violence against Children Partnership (EVP), and Every Woman Every Child (EWEC), which are already effectively coordinating action to promote different aspects of early childhood development. ECDAN also builds on the experience of the Consultative Group on Early Child Care and Development, which has just ended, but for several decades contributed to the improvement of early childhood policy and practice, through coordinated advocacy and the analysis, synthesis, and dissemination of knowledge. And it builds on some existing regional networks, such as the Africa Early Childhood Network (AfECN), Arab Network for Early Childhood Development, Asia Regional Network for Early Childhood (ARNEC), and International Step by Step Association (ISSA), among others.

What will ECDAN do?

In order to achieve its vision of all young children reaching their potential, ECDAN will:

- coordinate action among diverse actors working to support young children at country, regional and global levels

3 Other efforts had also been laying a foundation for greater support for young children, including the Global Strategy for Women's, Children's and Adolescents' Health with its objectives of Survive, Thrive and Transform.

4 UN agencies, World Bank, CSOs, early childhood development regional networks, academia and foundations.

△ *Photo: Courtesy Asociación Red INNOVA*

- share knowledge across countries and communities, including technical tools and resources, advocacy materials, etc.
- raise demand for services for young children and their families through expanded and coordinated advocacy initiatives.

These efforts, which will be undertaken through ECDAN partners, will contribute to building a movement to improve outcomes for young children worldwide. Within this movement, ECDAN's priority is to assist countries in their efforts to provide high-quality, equitable services that support parents and other caregivers of young children, especially from birth to age 5. To do this, ECDAN created six 'task forces' to define priorities and start creating, identifying, and/or enhancing key resources and tools in critical areas that ECDAN will support. More than 100 experts and practitioners from a diverse group of partner organisations volunteered their time, creativity, and insight for this endeavour. Here are some examples of what they achieved:

- The **interventions** old group proposed the development of a knowledge hub that can help decision makers narrow the universe of evidence-based intervention possibilities to those most likely to have an impact on young children in their context. The group also created a guide designed to assist

countries in their efforts to develop multisectoral early childhood initiatives, including an overview of the proven sectoral entry points for establishing and strengthening these initiatives.

- The **workforce** group developed definitions and a typology of early childhood workforce requirements, including volunteers, para-professionals, and professionals; prepared recommendations on financial and technical assistance needed to strengthen workforce capacity; and further enriched a Knowledge Hub with early childhood workforce resources, building on the online portal developed by the Early Childhood Workforce Initiative[5], co-led by ISSA and the Results for Development (R4D) Institute.
- The **data and evidence** group prepared a global mapping of measurement tools and capacity-building entities. It emphasised the need to create an enabling environment for building/strengthening national early childhood data systems.
- The **financing** group developed recommendations for a common early childhood costing framework, focusing on national capacity building to identify and leverage innovative financing, building on existing global costing tools developed by ECDAN partners. The group also recommended the development of an early childhood financing toolkit for policymakers, and an advocacy tool to leverage financing at country level.
- The **advocacy** group developed a strategy for improving the effectiveness of policy advocacy efforts at national and global levels, including how to connect, inform, and mobilise advocates around young children, and engage leaders outside of the early childhood field. This group is hosting a webinar series among ECDAN partners to exchange advocacy plans and resources, to maximise synergies, and increase the reach of each partner's efforts.
- The **results framework** group developed a Theory of Change and global results framework for ECDAN, including SDG indicators from multiple sectors as well as intermediate indicators, to track progress over time.

'The participation of this range of actors is critical to translate the existing strong evidence base into action, and to achieve improved child outcomes.'

How will ECDAN engage with countries?

The primary goal of ECDAN is to accelerate results at the country level. To guide this process, ECDAN has designed a country engagement strategy anchored in two key principles:

- **Universality** All countries will be able to engage with the network, through different modalities.
- **Phased approach** The network will start small, and gradually engage with a larger number of countries to allow sufficient time for learning to guide the expansion of the initiative.

ECDAN will use different modalities of engagement with countries to address different needs and contexts:

- **Learning Countries** In 2017, a small group of countries will start to shape and define ECDAN. While they advance their own country efforts to strengthen planning, prioritisation, coordination and, eventually, implementation, to improve outcomes of young children, they will co-create ECDAN's future.

5 Information about the Early Childhood Workforce Initiative is available at http://www.earlychildhoodworkforce.org.

- **Action Countries** In 2018, ECDAN will expand efforts to coordinate and scale-up support in a larger group of countries.
- **Learning Exchange Countries** Countries interested in exchanging lessons learned or sharing resources and improving programmes and policies for young children will be embraced as ECDAN matures and develops knowledge-sharing platforms.

What's ahead?

To date, ECDAN has generated tremendous momentum and energy among partners. The network is still in its early days and this learning stage depends on the continued engagement and support of champions from different constituencies working for young children. Incorporating perspectives from participating countries and partners will be critical in shaping ECDAN for the future and ensuring that it can, through coordinated and synergistic action, achieve the goal of all young children, without exception, achieving their developmental potential.

For more information on ECDAN or to join the mailing list, contact: ecdan.global@gmail.com

References

Black, M.M., Walker, S.P., Fernald, L.C.H., Andersen, C.T., DiGirolamo, A.M., Lu, C. *et al.* (2016). Early childhood development coming of age: science through the life course. *The Lancet* 389(10064): 77–90.

Britto, P.R., Lye, S.J., Proulx, K., Yousafzai, A.K., Matthews, S.G., Vaivada, T. *et al.* (2016). Nurturing care: promoting early childhood development. *The Lancet* 389(10064): 91–102.

The Global Goals for Sustainable Development. [online] *The Goals*. Available at: http://www.globalgoals.org/#the-goals (accessed March 2017).