Early childhood development: the foundation of sustainable development

Panel Discussion

Moderator:

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Director Early Opportunities and Senior Fellow for Bernard van Leer Foundation

ISSA Conference Early Childhood in Times of Rapid Change
11-13 October, Vilnius
Panelist: Bernadette Daelmans, WHO - Maternal, Newborn, Child and Adolescent Health (MCA)

Discussants:
Ilgi Ertem Department of Pediatrics, Ankara University, Turkey
Svetlana Jankovic Institute of Public Health of Belgrade, Serbia
Edward Melhuish Department of Education, University of Oxford, UK.
What’s new in the 2016 series?

• Focus on young children – conception to age 3 years
• Life-course approach
• Better grounded estimates of the burden
• Concept of nurturing care
• Interventions to improve child development
• Cost of inaction
• Case studies of scale
• Affordability
Global progress on early childhood development
Momentum is growing

Since *The Lancet* published the landmark series, *Child Development in Developing Countries* in 2007 and 2011

- Scientific publications increased up to 7-fold
- Funding increased
- ECD actors increased
- One-third of countries adopted policies
- Global support with the SDGs

2000 – 2015
Countries with a national multi-sectoral early childhood development policy instrument in 2014
Burden of risk

2004 data

REVISED 2004 data

11% Decline

2010 data

19 million children in LMICs at risk

279 million children

49.4 million children

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Children at risk
Risk varies significantly by low, middle and upper-middle income countries:

- **Europe & Central Asia:**
  - 17% stunted
  - 3% in extreme poverty

- **Latin America and Caribbean:**
  - 15% stunted
  - 6% in extreme poverty

- **Sub-Saharan Africa:**
  - 39% stunted
  - 50% in extreme poverty

- **South Asia:**
  - 40% stunted
  - 28% in extreme poverty
Looking beyond risks of poverty & stunting

• Both low maternal schooling and child maltreatment are related to poor child outcomes

• When you add these factors, risk for poor outcomes increases dramatically

From 62.7% for stunting and extreme poverty
To 75.4% with the other risk factors added
Accumulation of adversity

• As the number of risk factors increases, the severity of impact rises

• Children in LMICs are exposed to a greater number of risks
Importance of the early years
The amazing journey of human development

A genetic blueprint in the embryo/fetus establishes the broad strokes of development

Environment modifies this blueprint during critical periods of development
Sensitive periods and the developing brain

Human Brain Development
Synapse formation dependent on early experiences

Cell division and migration

Hypothesis Pathways (vision & hearing)
Language
Higher Cognitive Functions

Sensory Pathways (vision & hearing)  Language  Higher Cognitive Functions
Gene environment interactions underlie developmental programming

- Parent’s Health/Wellbeing Pre-pregnancy
- Pregnancy Environment
- Environment in Infancy/Childhood

Quality and timing of early environments shape a child’s future potential.

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New evidence: longitudinal outcomes

- Interventions
- Birth cohort studies
  - Long-term follow ups show that growth failure in the first two years of life has extensive effects
  - Deficits and disadvantages are carried over into the subsequent generation
Life-course approach

- Foetal development
- Infant & child growth & development
- Adolescent education & health
- Adult health & human capital
- Inter-generational effects
Evidence-based interventions and nurturing care
Review of interventions across multiple sectors

Comprehensive review of intervention studies published since 2010:
RMNCH • nutrition • parenting • early childhood education • maltreatment prevention

Evidence in each sector

Interventions that benefit child development
Examples of MCH interventions that benefit child development

- Iodine supplementation, before and during pregnancy and iron and folate supplementation
- Antenatal corticosteroids for preterm risk
- Psychosocial support during childbirth
- Kangaroo mother care for small infants
- Breastfeeding
- Multiple micronutrient supplementation for at risk children
# Evidence-based interventions

<table>
<thead>
<tr>
<th>Family planning</th>
<th>Routine antenatal care and antenatal nutrition</th>
<th>Routine care for labour and childbirth</th>
<th>Neonatal disease prevention and treatment</th>
<th>Infectious disease prevention</th>
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</thead>
<tbody>
<tr>
<td>Periconceptional nutrition</td>
<td>Maternal infection prevention, diagnosis, and treatment</td>
<td>Management of birth complications</td>
<td>Healthy home care and nutritional support</td>
<td>Detection and management of childhood illness</td>
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<td>Assessment and management of fetal health and growth</td>
<td>Immediate newborn care</td>
<td>Promotion of optimal infant and young child feeding</td>
<td>High quality childhood care and education programmes</td>
</tr>
</tbody>
</table>

### Adolescence and adulthood
- First trimester
- Second trimester
- Third trimester

### Pregnancy
- Labour onset-first 3 days

### Labour and birth
- First week-first month
- 1–23 months

### Infancy
- 24–60 months

### Early childhood
- 5–10 years

### School age
- 5–10 years

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</table>
Parenting and nurturing care

- Nurturing care envelops early child development
- Comprises all essential elements for a child to grow physically, mentally and socially:
  - Nutrition
  - Health care
  - Love and security
  - Protection from danger
  - Opportunities to learn and discover the world
Nurturing care is fostered by a supportive environment – the ecological model

- National policies
- Health, nutrition, education, social and child protection services
- Capacity to provide nurturing care
- Nurturing care by parents and caregivers
Multi-sectoral intervention packages to improve child development

- **Family Support & Strengthening Package**: Access to quality services, skills building, support
- **Multigenerational Nurturing Care Package**: Care and protection of mothers’ and fathers’ physical and mental health and wellbeing, and their capacity to provide nurturing care
- **Early Learning & Protection Package**: Integrates support for young children with parental and caregivers’ support to create a nurturing learning environment
Delivery platforms to reach families
The importance of health and nutrition services

- Well-developed platform
- Extensive reach to women and children during sensitive periods
- Existing MCH services benefit child development
- Child development interventions successfully delivered in collaboration with health services
- Effective and affordable
### Other platforms to reach families, young children

<table>
<thead>
<tr>
<th><strong>Education</strong></th>
<th><strong>Social protection</strong></th>
<th><strong>Child protection</strong></th>
<th><strong>WASH</strong></th>
</tr>
</thead>
</table>
| • Women’s education  
• Early learning opportunities  
• Child daycare  
• Preschool  | • Family health insurance  
• Cash transfers  | • Reduction of harsh punishment  
• Prevention of child maltreatment  | • Access to clean water  
• Sanitation  
• Hygiene  |
Conducive policy environment
## Examples of national policies

To enable families to provide nurturing care

<table>
<thead>
<tr>
<th>Time</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Breastfeeding breaks at work</td>
<td>• Cash transfers</td>
</tr>
<tr>
<td>• Parental leave</td>
<td>• Health insurance</td>
</tr>
<tr>
<td>• Leave to look after sick children</td>
<td>• Minimum wage</td>
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<tr>
<td></td>
<td>• Free pre-primary education</td>
</tr>
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</table>
Free pre-primary education

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Advancing Early Childhood Development: from Science to Scale
Country case studies of scale
## Four country case studies

<table>
<thead>
<tr>
<th>Country</th>
<th>Program Name</th>
<th>Start Year</th>
<th>End Year</th>
<th>Key Achievements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>India</strong></td>
<td>Integrated Child Development Services (ICDS)</td>
<td>1975</td>
<td>2014</td>
<td>104.5 million beneficiaries</td>
</tr>
<tr>
<td><strong>Chile</strong></td>
<td>Chile Crece Contigo (ChCC)</td>
<td>2007</td>
<td>2014</td>
<td>2014 80% target population</td>
</tr>
<tr>
<td><strong>South Africa</strong></td>
<td>Grade R</td>
<td>2005</td>
<td>2015</td>
<td>2015 80% of children enrolled</td>
</tr>
<tr>
<td><strong>Bangladesh</strong></td>
<td>Shishu Bikash Kendra (SBK)</td>
<td>2008</td>
<td>2009–2016</td>
<td>2009–2016 200,000 child visits</td>
</tr>
</tbody>
</table>
Common features of large-scale programs

1. Political concerns about poverty, equity, social exclusion
2. Informed by scientific and economic evidence
3. Vision of comprehensive and integrated services
4. Founded by statute or government strategy
5. Funded and led by government
6. Different entry points – most often health, starting from pregnancy
The cost of inaction
The personal cost of inaction in grades and earnings lost

<table>
<thead>
<tr>
<th></th>
<th>Grade Deficit</th>
<th>Income Loss</th>
<th>Children</th>
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<tbody>
<tr>
<td>Stunted only</td>
<td>4.67</td>
<td>42.3%</td>
<td>106.5m (18.5%)</td>
</tr>
<tr>
<td>Poor only</td>
<td>0.71</td>
<td>5.8%</td>
<td>75.6m (13.1%)</td>
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<tr>
<td>Stunted and poor</td>
<td>6.56</td>
<td>32.4%</td>
<td>67.2m (11.7%)</td>
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</tbody>
</table>
The personal cost of inaction in grades and earnings lost

43% of children in LMICs (249 million) lose 26.6% of average adult income
Societal costs of inaction

**Early childhood risks**
- Poverty
- Poor maternal health
- Pregnancy & birth complications
- Under-nutrition
- Infections
- Lack of learning opportunities
- Exposure to violence

**Family and public investments, interventions**

**Outcomes to age 2y**
- Growth, health, wellbeing

**Outcomes to preschool**
+ School readiness

**Outcomes late childhood**
+ School achievement

**Outcomes adolescence, adulthood**
+ Health, wellbeing, earnings

**Advancing Early Childhood Development: from Science to Scale**
## Societal cost – two simulations

### Not Reducing Stunting

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
<th>Govt health expenditure (%GDP)</th>
<th>Cost of inaction (%GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>DRC</td>
<td>2.9</td>
<td>2.5</td>
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<td>Ethiopia</td>
<td>1.8</td>
<td>7.9</td>
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<td>Kenya</td>
<td>1.8</td>
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<td>Madagascar</td>
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<td>Nigeria</td>
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<td>11.1</td>
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<td>Uganda</td>
<td>1.9</td>
<td>7.3</td>
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<td>South Asia</td>
<td>Bangladesh</td>
<td>1.2</td>
<td>5.6</td>
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<td>India</td>
<td>1.3</td>
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<td>Nepal</td>
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<td>Pakistan</td>
<td>1.0</td>
<td>8.2</td>
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### Not Addressing Poor Childhood Development

<table>
<thead>
<tr>
<th>Country</th>
<th>Govt education expenditure (%GDP)</th>
<th>Cost of inaction (%GDP)</th>
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</thead>
<tbody>
<tr>
<td>Guatemala</td>
<td>3.2</td>
<td>1.4</td>
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<td>Nicaragua</td>
<td>6</td>
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<td>Colombia</td>
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<tr>
<td>Peru</td>
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<td>0.1</td>
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<td>Ecuador</td>
<td>4.7</td>
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<td>Chile</td>
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Spotlight on two intervention packages

Recommendations for Care for Child Development

- Give your child affection and show your love
- Be aware of your child's interests and respond to them
- Praise your child for trying to learn new skills
Cost of scale up of these packages (2015-2030)

- Medium (58%)
  - US$16 billion
  - 20c per capita/year

- High (98%)
  - additional 50c per capita/year

<table>
<thead>
<tr>
<th>Countries</th>
<th>HIGH scenario (billions)</th>
<th>MEDIUM scenario (billions)</th>
<th>Incremental per capita costs</th>
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<tbody>
<tr>
<td>Upper Mid Income (11)</td>
<td>17.3</td>
<td>8.5</td>
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<td>Lower Mid Income (32)</td>
<td>15.5</td>
<td>6.6</td>
<td>0.20</td>
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<tr>
<td>Low Income (30)</td>
<td>1.6</td>
<td>0.9</td>
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<td>TOTAL</td>
<td>34.5</td>
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The way forward
Recommendations

1. Science says “start early,” conception-3y
2. Expand political will through the SDGs
3. Create conducive policy environments
4. Adopt a multi-sectoral framework
5. Use the health sector as an entry point
6. Support system enablers
Advancing Early Childhood Development: from Science to Scale
Focus on children from conception to age 3

1. Heightened susceptibility

2. Neglect in favour of child survival and pre-primary education

3. Opportunities for interventions through health services
Expand political will through the SDGs

The SDGs call for:
• Equitable opportunities
• All countries to prioritise the most vulnerable

Provides unprecedented opportunity to scale-up early child development services for young children

SDG Target 4.2

Ensure that all girls and boys have access to quality early childhood development, care and pre-primary education by 2030
Support implementation, coordination and evaluation

• No blueprint for how to implement or coordinate
• Sectors may serve children and families independently under a structure for sharing responsibility nationally and locally
• Coordination under a single ministry, in collaboration with other sectors
• Coordination under a high level central council or similar body
“Evidence consolidated in this series points to effective interventions and delivery approaches at a scale that was not envisaged before. During the next fifteen years, world leaders have a unique opportunity to invest in the early years for long-term individual and societal gains and achievement of the SDGs.”

– Excerpt from Executive Summary
Acknowledgement

- Conceived in Melbourne at IPA in August 2013, with the support of *The Lancet*
- 43 authors, 29 additional experts contributed technical information
- From disciplines as diverse as Biology, Epidemiology, Economics, Education, Developmental Psychology, Genetics, Paediatrics, Public Health, Political Science, Nursing, Neuroscience, Statistics, Sociology, Nutrition, Global Health
Advancing Early Childhood Development: from Science to Scale

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For more information:
http://www.ewechub.org/the-lancet-ecd-series
How desparate is the situation? A Tale of Three Cities

• A premature infant birth weight 980 grams, both parents pediatricians—Caregivers are desparate

• A medical school decides to include ECD/DP in curriculum—Providers are desparate

• Children aged 0-3 years with developmental difficulties in a metropol of 20 million—Policy implementations are desparate
• **Lancet Series:** Why ECD, what works, costs, inaction cost, reasons for slow progress and more

• **Important additions:**
  - Children with special needs/disability
  - Preservice training for the work force
  - Theoretical content

• **Policy must incorporate theory:**
  - Bioecological theory
  - Attachment theory
  - Motherhood constellation
  - Strengths based, family centered
  - ICF based: functioning, activities, participation

• **PARTNERSHIP IS KEY**
• Investment in ECD does not have an alternative!

• SDG’s platform on a country level
• Participatory policy dialog
• Strong commitment
• Multisectoral approach
• Responsible governance
• Stakeholder partnership
• Build on existing structure
• Universal progressive service delivery system
• Challenges in:
  • financial incentives
  • capacities of human resources
  • structure for monitoring and evaluation
  • capacities for governance and leadership
  • framing policies
  • conceptualization on ECD

• Strong commitment and fight against poverty and inequities!
• Policies  EFFECTIVE PRACTICES
Effects at Age 16: Literacy and Numeracy
# Gains from ECEC

## Education and Social Adjustment
- Educational Achievement improved
- Special education and grade repetition reduced
- Behaviour problems, delinquency and crime reduced
- Employment, earnings, and welfare dependency improved
- Smoking, drug use, depression reduced

## Decreased Costs to Government
- Schooling costs
- Social services costs
- Crime costs
- Health care costs
Take action

• Start early (and early means early) preconception through age 3
• Take a multi sectoral approach- remember the concept of nurturing care brings us together
• Start with health, but use all platforms
• Create an enabling environment for parents to be successful
• Build political will by reaching out to new champions and building partnerships
Celebrate every step forward and be persistent....children and families need you!