Advancing Early Childhood Development: from Science to Scale

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and
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What happens to children who survive?

Over 200 million children under 5 years of age in LMICs are not fulfilling their developmental potential.
2016 ECD Series: 3 papers, plus 8 commentaries & notes

Advancing Early Childhood Development: from Science to Scale 1

Early childhood development coming of age: science through the life course

Maureen M Black, Susan P Walker, Lia C H Fernald, Christopher T Andersen, Ann M DiGirolamo, Chunling Lu, Dana C McCoy, Günther Fink, Yusra R Shawar, Jeremy Shiffman, Amanda E Devercelli, Quentin TWodon, Emily Vargas-Barón, Sally Grantham-McGregor*, for the Lancet ECD Childhood Development Series Steering Committee†

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What’s new?
2016 Early Child Development Series

- **Science**
  - Focus on young children – conception to age 3y
  - Life-course approach
  - Nurturing care

- **Policies**
  - Updated estimates of the burden
  - Cost of inaction
  - Widespread endorsement as strategy to achieve Sustainable Development Goals (SDGs)
Gene environment interactions underlie developmental programming

Development
Variations in Genetic Sequence
Epigenetic Modification

Environment

Adult Health and Wellbeing
Cardiovascular disease
Obesity/diabetes
Mental health
Cognitive function
Behaviour/social function

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Environments across the life-course

Quality & timing of early environments shape children’s potential

Parent’s Health/Wellbeing Pre-pregnancy

Pregnancy Environment

Environment in Infancy/Childhood

Genetic Blueprint for Development
Sensitive periods and the developing brain

Human Brain Development
Synapse formation dependent on early experiences

-8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

Conception to Birth Age in Months Age in Years

Cell division and migration

Sensory Pathways (vision & hearing) Language Higher Cognitive Functions

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Life Course Perspective to Child Development

Healthy nutrition and learning opportunities throughout life
Life Course Perspective to Child Development

- Conception
  - Healthy nutrition and learning opportunities throughout life
  - Birth
    - Early Childhood
      - Childhood
      - Adolescence
      - Adulthood
      - Chronic health problems
      - Limited economic potential
Nurturing Care

- Nurturing care promotes early child development
  - Nutrition
  - Health care
  - Responsive caregiving
  - Protection from danger
  - Opportunities to explore, learn and discover
What is Nurturing Care?

1. Contingent Responsiveness: parent responses are prompt, related to child, & developmentally appropriate.

2. Nurturant: warm & sensitive

3. Routines: reduced household chaos

4. Early learning: Shared book reading, story telling, opportunities for exploration

5. Promote child health, nutrition, & safety: (e.g., prenatal care breastfeeding, adequate nutrition, etc.)

6. Guidance: appropriate (not harsh) discipline
Nurturing care is fostered by a supportive environment

Nurturing care: parents & caregivers
Nurturing care is fostered by a supportive environment – the ecological model

Capacity for nurturing care

Nurturing care: parents & caregivers
Nurturing care is fostered by a supportive environment – the ecological model

Early Child Development Programs

Capacity for nurturing care

Nurturing care: parents & caregivers

Nurturing care is fostered by a supportive environment – the ecological model
Nurturing care is fostered by a supportive environment – the ecological model

National Policies

Early Child Development Programs

Capacity for nurturing care

Nurturing care: parents & caregivers
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
Momentum is growing

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

- **2004 data**: 219 million children in LMICs at risk
- **REVISED 2004 data**: 279 million children
- **11% Decline**
- **2010 data**: 249 million children

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Risk varies significantly by low, middle and upper-middle income countries

60% or more
40-59%
20-39%
Less than 20%
Missing or excluded
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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</thead>
<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>
</tr>
<tr>
<td>Stunted and poor</td>
<td>6.56</td>
<td>32.4%</td>
<td>67.2m (11.7%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>249.3m (43.3%)</strong></td>
</tr>
</tbody>
</table>
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**

**Age 2y**
- Growth, health, wellbeing

**Preschool**
- School readiness

**Late childhood**
- School achievement

**Adolescence, adulthood**
- Health, wellbeing, earnings
Features of large-scale successful programs

1. Political commitment
2. Informed by scientific and economic evidence
3. Vision of comprehensive & integrated services
4. Statute or government strategy
5. Funded and led by government
6. Multiple entry points – begin early - pregnancy or before

Political commitment & leadership
Sustainable Development Goals (SDGs) 2016-2030

- Universal (not only low & middle income countries)
- How to provide for 7.4 billion people
- Requires healthy, productive citizens

- Lifespan perspective

https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals
Improving Early Child Development: Key to achieving the SDGs

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SDGs: Nutrition & Early Child Development

- By 2030 end all forms of malnutrition, including achieving by 2025 the internationally agreed targets on stunting and wasting in children under five years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women, and older persons.

- By 2030 ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education. No clear indicators.
Early Child Development
A good start in life ensures a sustainable future for all

Margaret Chan, WHO
Anthony Lake, UNICEF
Jim Yong Kim, The World Bank Group
Ban Ki-Moon, United Nations
Post Lancet…..

• Early Childhood Development Action Network (ECDAN)
  1. Scaling-up multi-sectoral interventions
  2. Building ECD workforce
  3. Strengthening national data
  4. Finance
  5. Advocacy

• African Early Childhood Network

• 0 – 3 Population-based Measure
Authors

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