THE EARLY CHILDHOOD PERIOD, VIOLENCE PREVENTION AND THE SUSTAINABLE DEVELOPMENT AGENDA

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DEFINITIONS OF THE EARLY CHILDHOOD PERIOD

- Early childhood is defined as the period from prenatal development to eight years of age. (WHO, ECD A Powerful Equalizer, 2007)

- Early childhood is defined as the period from birth to eight years old (UNESCO). UNESCO uses the term Early Childhood Care (Nurturing) and Education (Schooling)

- The first 1,000 days (birth to 2 years) have been recognised to be particularly important: 270 days of pregnancy +365 days of Year 1 +365 days of Year 2.
Global Child Mortality Rate Has Fallen 47% Since 1990

Under-five mortality rate (per 1,000 births) 1990-2012

- Sub-Saharan Africa
- South Asia
- Middle East & North Africa
- Europe & Central Asia
- East Asia & Pacific
- Latin America & Caribbean

Source: World Bank
SUSTAINABLE DEVELOPMENT GOALS 4 AND 16

GOAL 4

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

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

GOAL 16

Promote peaceful and inclusive societies for sustainable development …..

16.1 Significantly reduce all forms of violence and related deaths everywhere

16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children
Why is ECD/E important enough to be in the SDGs?

Is there evidence to support the use of ECD/E interventions to prevent violence?

Are there any additional benefits to other SDGs?

What are the optimum pathways to intervene?

Are the interventions sustainable and scalable?
The brain grows most rapidly during the EC period.

Two thirds (2/3) of brain size is achieved by 21/2 to 3 years.

Growth then occurs more slowly until 18 years when adult head size is reached.
Average Number of Neurons in the Brain:
100 Billion

Number of Synaptic Connections at Birth:
50 Trillion

Number of Synaptic Connections after a few months (20 times):
1,000 Trillion
Maximal brain growth between birth and 6 years

“Use it or lose it principle”

Synapses or connections that are not used die away

Those that are used get stronger. Nurturing wires the brain for pro-social behaviour, exposure to violence wires the brain for aggression.
Sensitive periods in early brain development

- Vision
- Hearing
- Emotional control
- Conceptualization
- Peer social skills
- Language
- Habitual ways of responding

Graph developed by Council for Early Child Development (ref: Nash, 1997; Early Years Study, 1999; Shonkoff, 2000.)
OPPORTUNITIES FOR ECD INTERVENTION 1:
HIGH/SCOPE PERRY PRESCHOOL PROJECT, AGE 27 EFFECTS

![Bar chart showing various outcomes for program and no-program groups.]

OPPORTUNITIES FOR ECD INTERVENTION II: ECONOMIC RETURN

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Welfare</th>
<th>Child Care</th>
<th>Education</th>
<th>Earnings</th>
<th>Crime</th>
<th>Preschool</th>
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<tbody>
<tr>
<td>$8K</td>
<td>$65K</td>
<td>$173K</td>
<td>$249,663</td>
<td>$15,386</td>
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<td>$0</td>
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</tbody>
</table>

Costs:
- Welfare:
- Child Care:
- Education:
- Earnings:
- Crime:
- Preschool:

Total Benefits: $249,663
Total Costs: $15,386

VULNERABILITY OF THE EC PERIOD I: VIOLENCE, STRESS AND THE DEVELOPING BRAIN

- Exposure to violence is the most prevalent and severe form of stress for children.

- Stress systems are particularly malleable or “plastic” during the fetal and early childhood periods.

- Early experiences shape how readily they are activated and how well the responses can be contained and turned off.

- Stress responses that are activated too frequently or for prolonged periods in the absence of supportive systems (toxic stress) are damaging to the brain.
VULNERABILITY OF THE EC PERIOD II: VIOLENCE, STRESS AND THE DEVELOPING BRAIN

- Chronic inflammation
- Telomere erosion (emerging evidence)
- Gene expression
- Brain structure change (hippocampus, amygdala)
- Memory, IQ, Executive Function impairment

- Mental health disorders in children in short term
- Mental health disorders in adulthood
- Physical illness in adulthood: heart disease, metabolic disease, immune system, stroke, dementia

- Children are a valuable economic resource for healthy adulthood
IMPACT OF ADVERSITY ON BRAIN DEVELOPMENT

Normal Brain Development


At-Risk Brain Development

ENROLMENT OF CHILDREN 0-2 YRS. IN DAY-CARE

- Sub-Saharan Africa: 21%
- Arab States: 28%
- Central Asia: 35%
- World: 57%
- South and West Asia: 66%
- East Asia and the Pacific: 69%
- Central and Eastern Europe: 79%
- Latin America/Caribbean: 78%
- N. America/W. Europe: 89%

INDICATIVE TARGET 80%
CONCLUSIONS

- The EC period is the most important period of brain growth and development.
- Experiences of violence in EC impair brain growth & development and negatively impact adult health, education and well being.
- High quality ECD intervention reduces criminal behaviour, and improves adult education and well being.
- Opportunities to promote ECD and prevent exposure to violence exist through interventions by the health sector for children under 2 years (through parent and family support and education) and through the education sector (through parent and family support and quality ECD centres) for children 3 years and above.
- A comprehensive multi-sectoral approach is necessary for optimal ECD
ARE THERE LIKELY TO BE CHALLENGES?

**Sustainability / Scalability Positives**

Utilises existing health and education services reduces cost

**Challenges:**

- Engaging health staff to undertake additional responsibility

- No / Limited contact with health sector between 18 months and 3-4 years.

- High quality ECD is cost effective, but is expensive.

- Alternative mechanisms for those outside the net of health and pre-school services