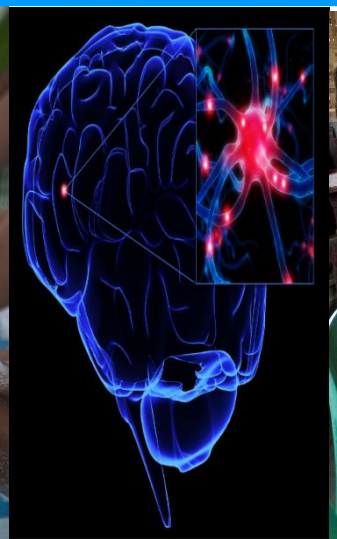
Nutrition in Early Childhood Care and Development





Why Early Childhood Care and Development and Nutrition?

ECCD as defined in Early Years Act of 2013

"…in the first 2 years of life, a child's brain forms 1,000 new neural connections per second. This pace of development is never repeated again in life. Reduced cognitive development is largely irreversible…"

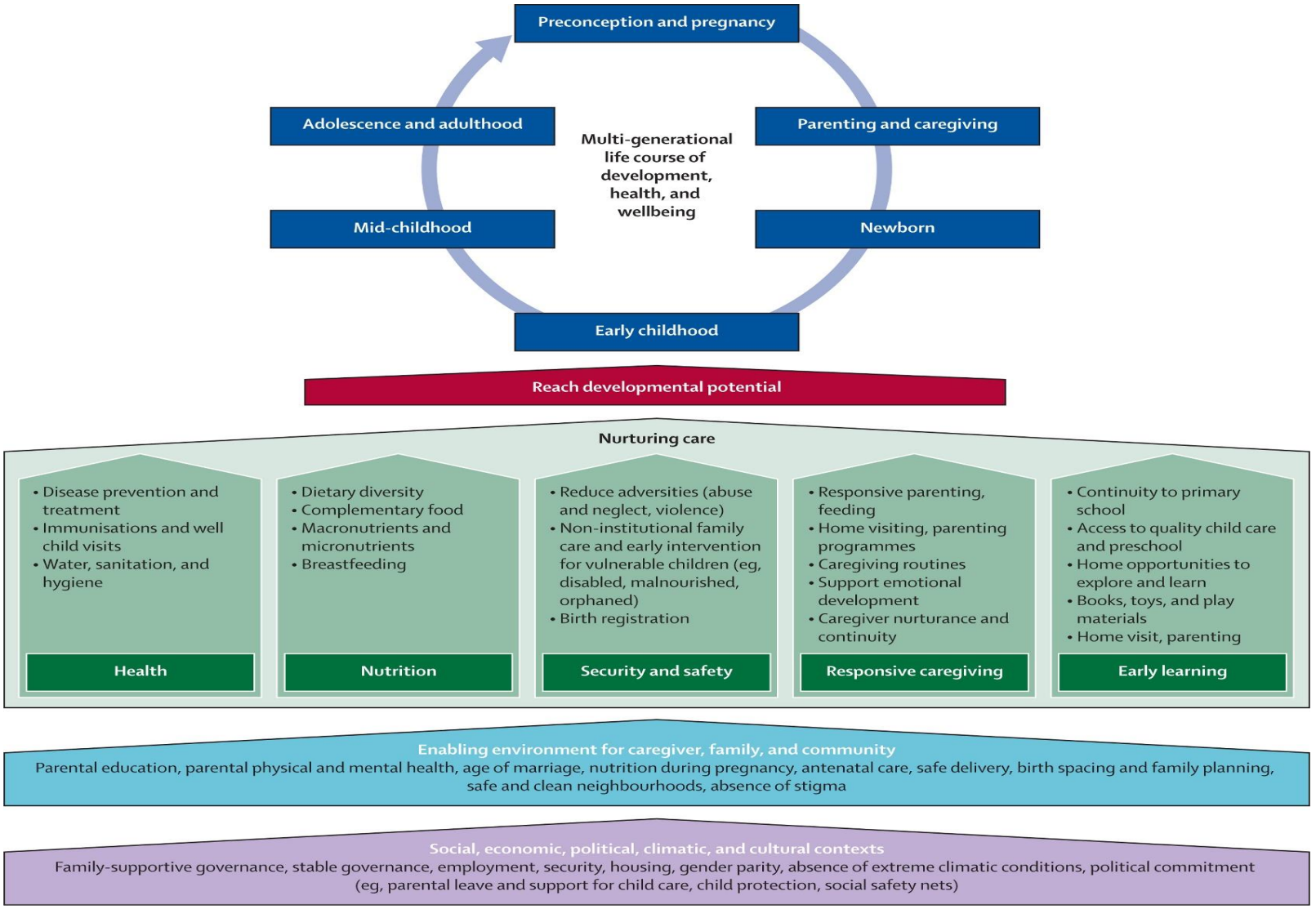
"…recognizing the age from zero (0) to eight (8) years as the first crucial stage of educational development.."

"….full range of health, nutrition, early education and social services development programs that provide for holistic needs of 0-4 y/o children…."

Why Early Childhood Care and Development?

- In the Philippines, Almost 8 million children under 5 years fail to reach their developmental potential—in contrast to the 29,500 children who die of disease and poor health
- While more children are *surviving* due to improved access to healthcare, many more children are not *thriving*
- This represents a huge loss of human potential and results in poor long-term societal outcomes
- Failure to reach age-appropriate developmental milestones in the early years is often irreversible in later life
- Children who receive age-appropriate stimulation in the early years have better health, education, social, and economic outcomes 20–30 years later in life
- Stress during pregnancy and maternal depression contribute to behavior difficulties in children and are linked to poor child growth and development
- ECCD is a vehicle for health equity and social inclusion—especially for children that are malnourished, exposed to HIV, born premature/low birthweight, and who grow up in difficult circumstances (e.g., poverty and conflict)

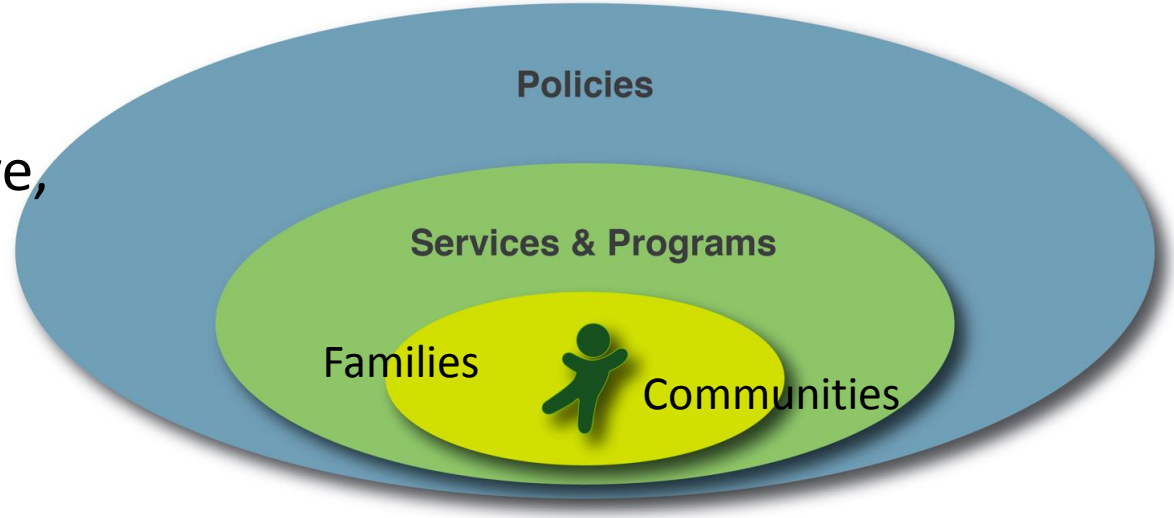
The effects of contexts, environments, and nurturing care through the multigenerational life course



Global definition of ECCD

CHILD

- Prenatal to 8 years of age; Holistic development – cognitive, social, physical, emotional, language, spiritual, moral…



FAMILY

- Parenting – care, attachment, early stimulation, positive social and emotional interactions with significant caregivers, playing, talking, reading, singing

PROGRAMME

- A set of coordinated services and quality contexts for young children and families implemented through systems of Health, nutrition, education, and protection

- In the 1st years of life the brain grows at the pace of 700 new neural connections per second-- a pace which is never achieved again

- By 3 years of age, a child brain is twice as active as an adult brain

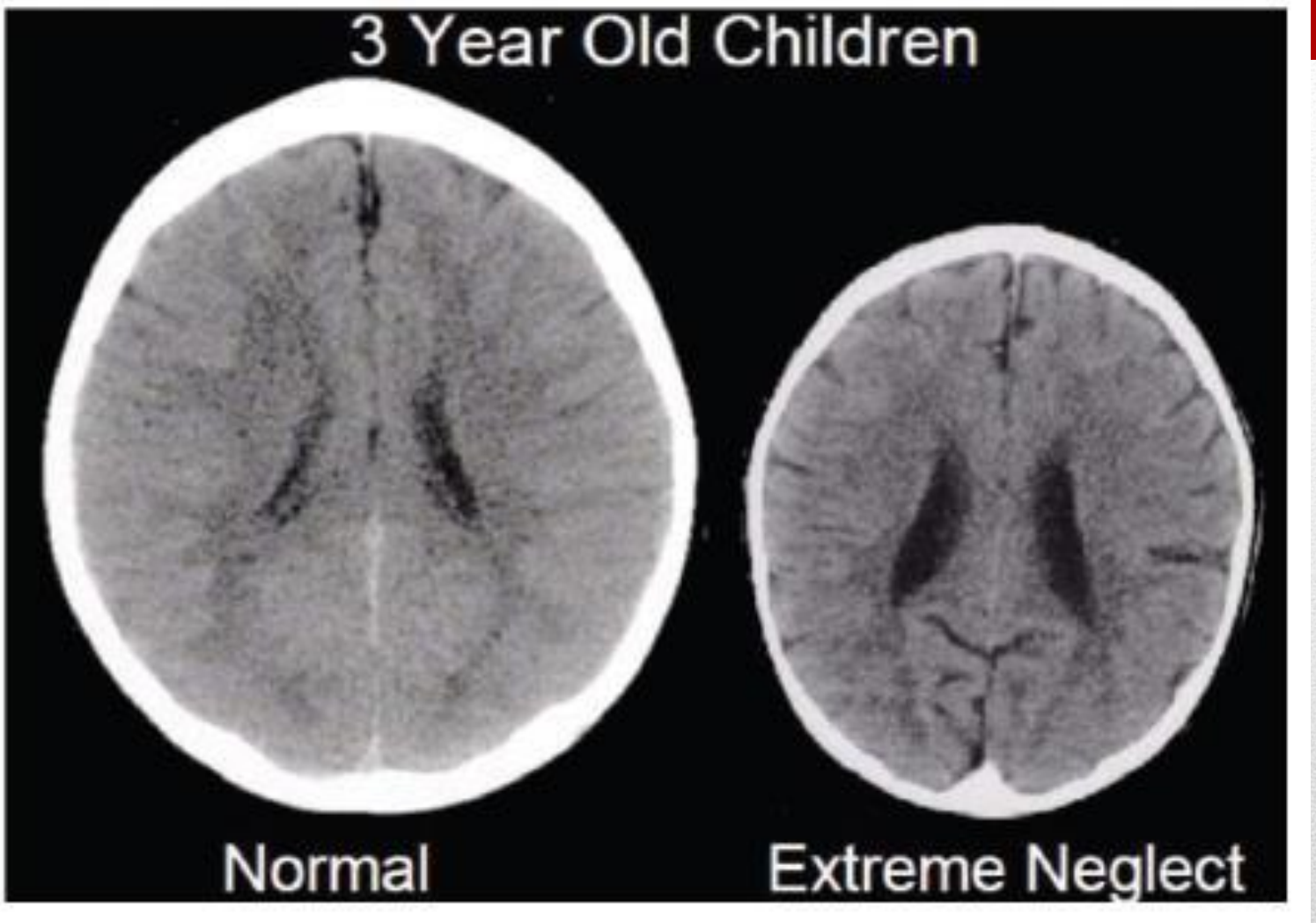
- 50 - 75% of energy consumption in the first few years of life is allocated to brain development

- 87% of brain weight is acquired by 3 years of age (1100 grams)

Early Childhood

the **most important** developmental phase in life

Early environmental conditions – deprivation, stress, relationships language – literally "sculpt" the developing brain

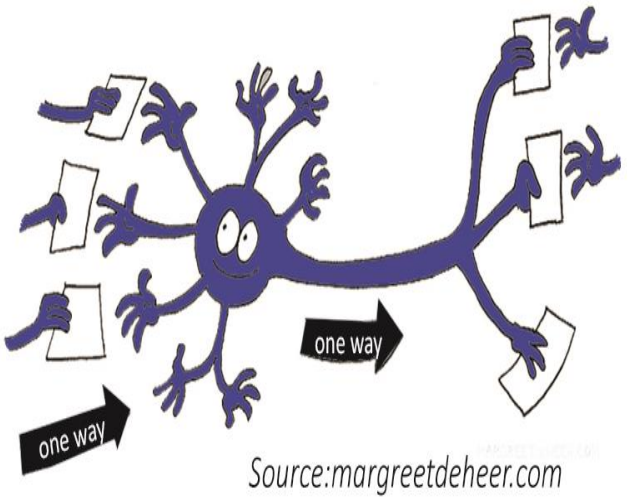


Healthy brain development needs nutrition, stimulation and protection

Source: UNICEF

How is brain development influenced by ECCD?

Each brain cell, a neuron, is shaped like a tree with branching ends, a root system that receives information and output side that send information to the hundred neurons



"Communication between neurons is the heart of all learning, hence the importance of connections in the brain" (Rushton and Rushton, 2009)

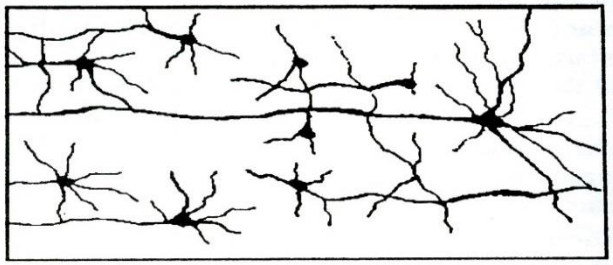
Early intervention is the answer

- Scientific evidence highlights the importance of:
  - Caring
  - Good health
  - Nutrition
  - Stimulation

  For all children, and especially those facing adversity (e.g., poverty and conflict)

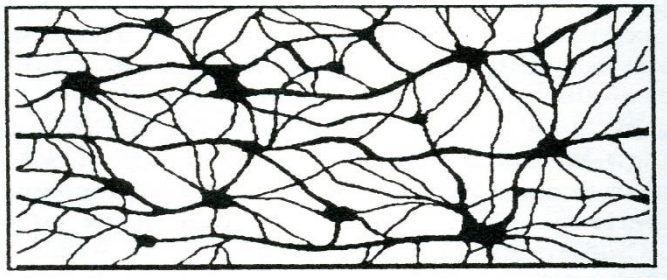
- ECCD includes significantly reducing childhood malnutrition, expanding child-sensitive social protection, and increasing early childhood stimulation and expanding early learning opportunities.

The unstimulated brain



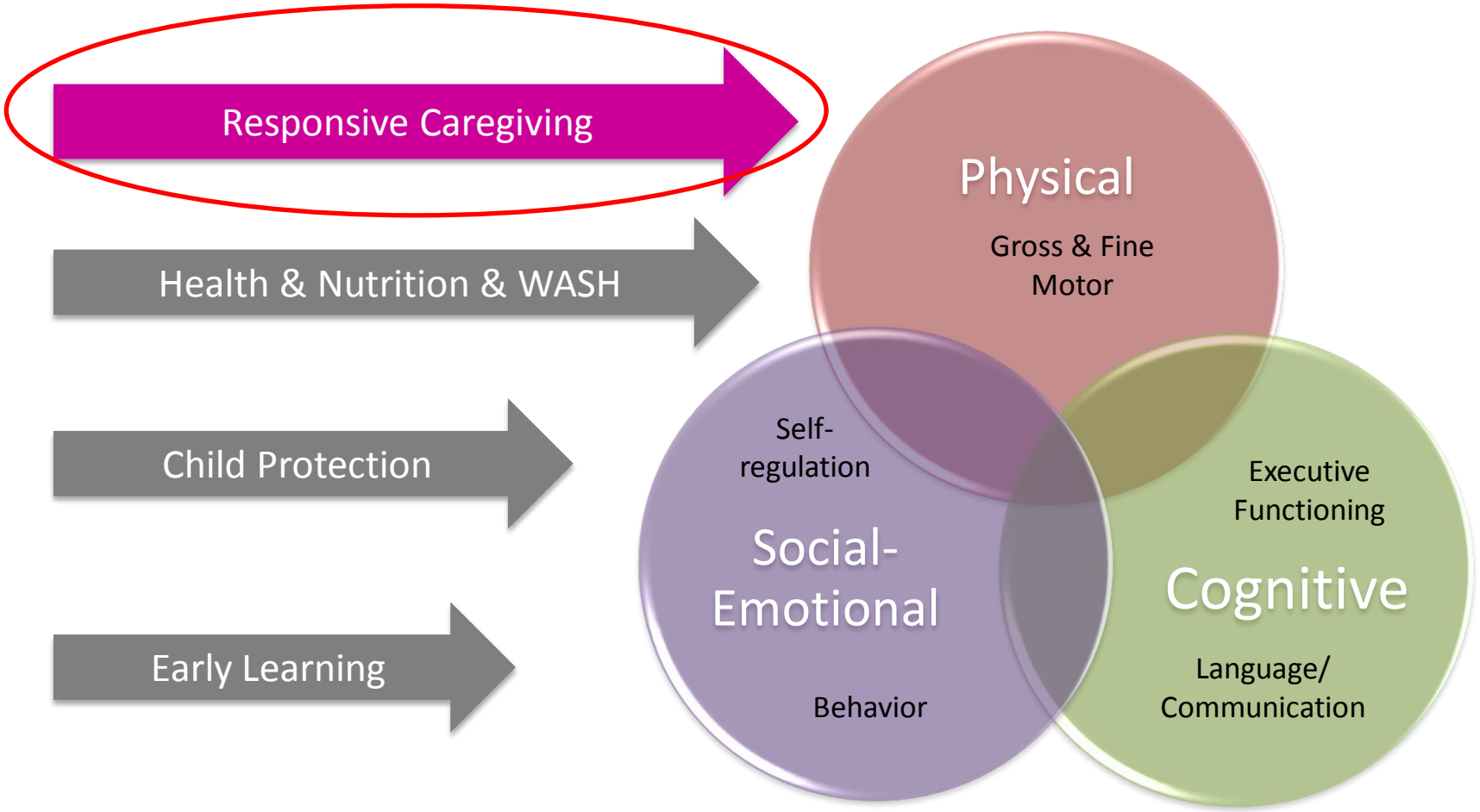
A model of an unstimulated brain with few interacting connections

The stimulated brain



A young brain rich in connections from stimulating activities

Early Childhood Development (ECD): *What is it all about?*



Responsive Caregiving: Children thrive in stable and engaged family environments in which parents show interest and encourage children's development and learning

Healthy infant and toddler development and learning happen within the context of secure, nurturing relationships with parents, family members, and other caring adults.

Responsive Caregiving Is

- "Being tuned-in," a keen observer of children and families
- Understanding the cues of infants and toddlers, then sensitively responding in ways that are helpful
- Using the environment to support development and extend learning

Health: Healthy positive interactions between infants and caretakers have a two generational effect

Strong early attachment and interactions between infant and caregiver

Release of OXYTOCIN

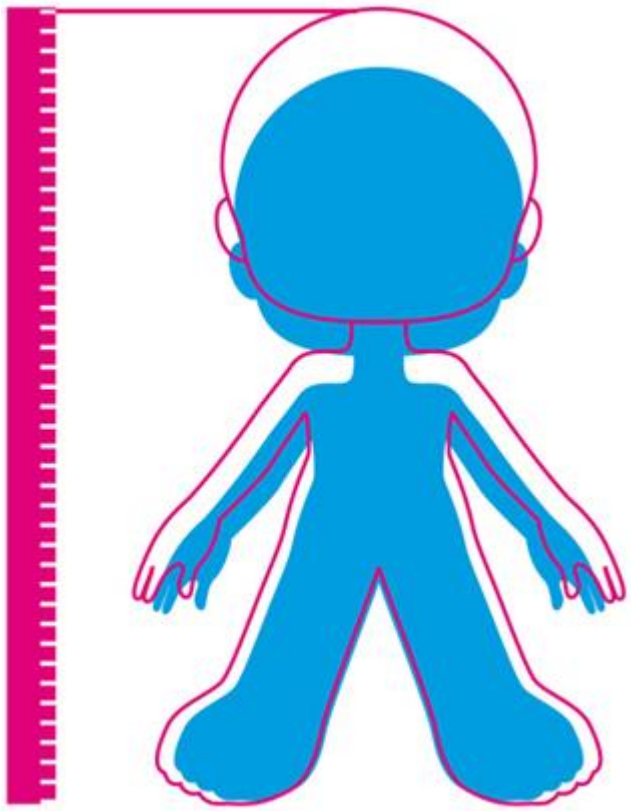
In mothers, encourage longer breastfeeding

Provides stimulation and nurturing, further strengthening the bond between child and caretaker

Supports better nutrition of young children

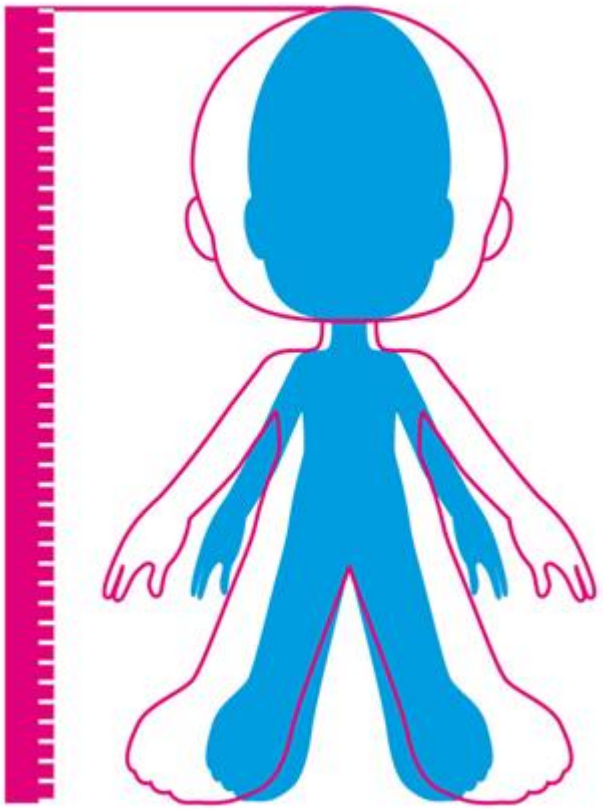
Undernutrition in Children

Low Height for Age



STUNTED CHILD

Low Weight for Height



WASTED CHILD

Nutrition: Inadequate early nutrition undermines brain development

- In gestation and infancy, the brain is the “energy hog” consuming bet 50-75% of all energy absorbed in the body from food, including fats, proteins, vitamins and minerals.

- Inadequate nutrition, during the that period affects the structure and functions of the brain in ways that its difficult to offset later

- Undernutrition is the underlying cause of almost half (45%) of child deaths in the world (around 34,675 Filipino children die per year due to undernutrition)

Nutrition: Inadequate early nutrition undermines brain development

- Good nutrition, health and proper care in the fist 1000 days give the best start of life-forever
- Key nutrition interventions for the first six months: adequate nutrition and care during pregnancy; support to exclusive breastfeeding in the first 6 months of life and giving of complementary food starting 6 months and continue breastfeeding up to 2 years and beyond
- Stress and nutrients interact with each other, affecting how the brain and body absorbs nutrients and influence a child's developmental status

Many Filipino children will not reach their full potential.

Stunting among infants and young children, 0-5 years old

- National = 30.3%
- Bicol = 38.8%
- ARMM = 39%
- Zamboanga Peninsula = 38.7%

- Stunting is more prevalent among males.

(National Nutrition Survey, 2013)

Nutrition: Stunted children will not reach their full potential.

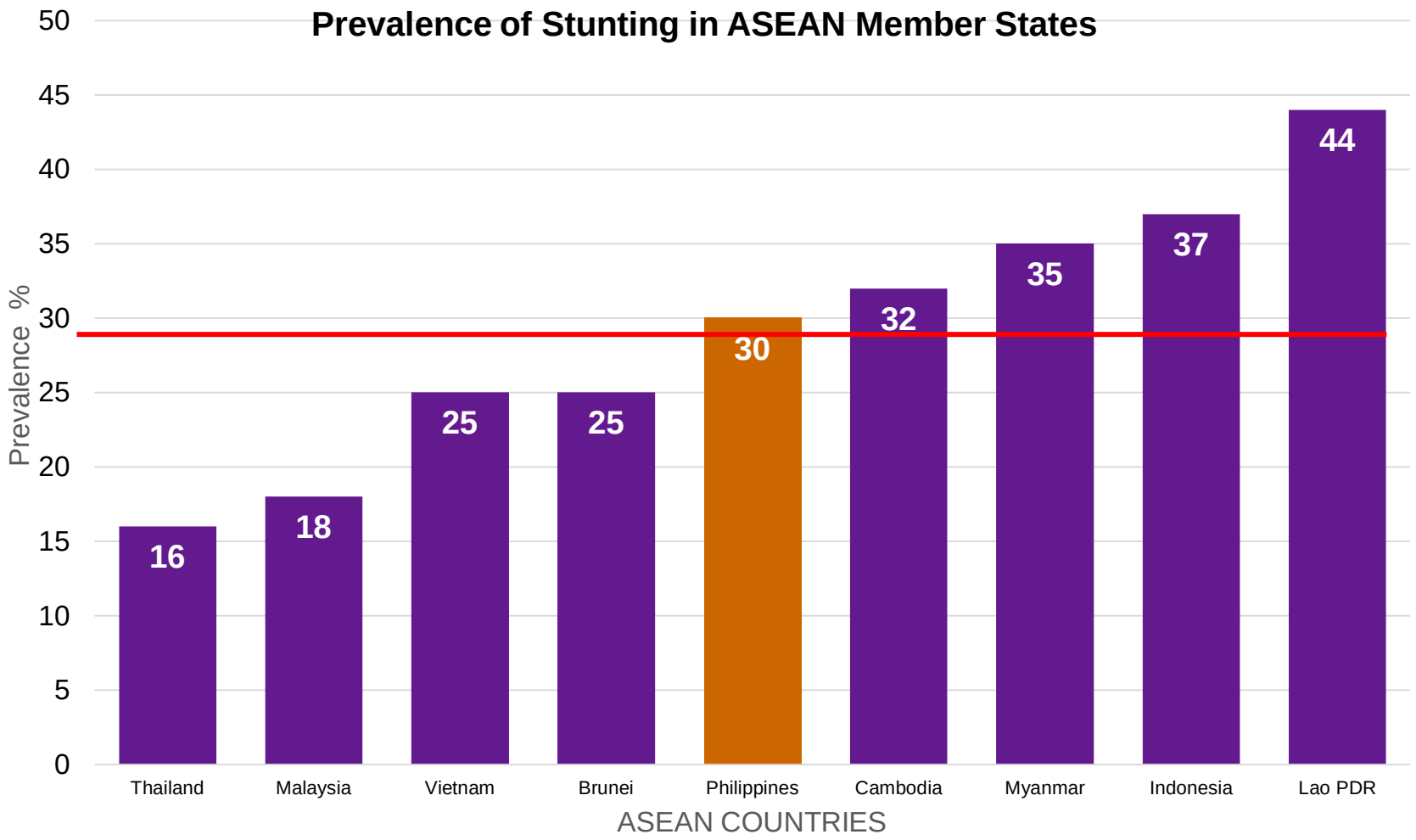
- **Fails to grow and develop to full potential**
- **Mental and physical deficits- Potentially Irreversible after 2 years of age**
- **Long term effects-poor cognition and learning performance in childhood and lowered productivity (wage loss and income) and increased risk of chronic diseases in adulthood**

In the Philippines, 33.4% of children ages 0-5 years are stunted.*

4 years old (stunted) **2 years old (normal)**

*DOST-FNRI NNS, 2015

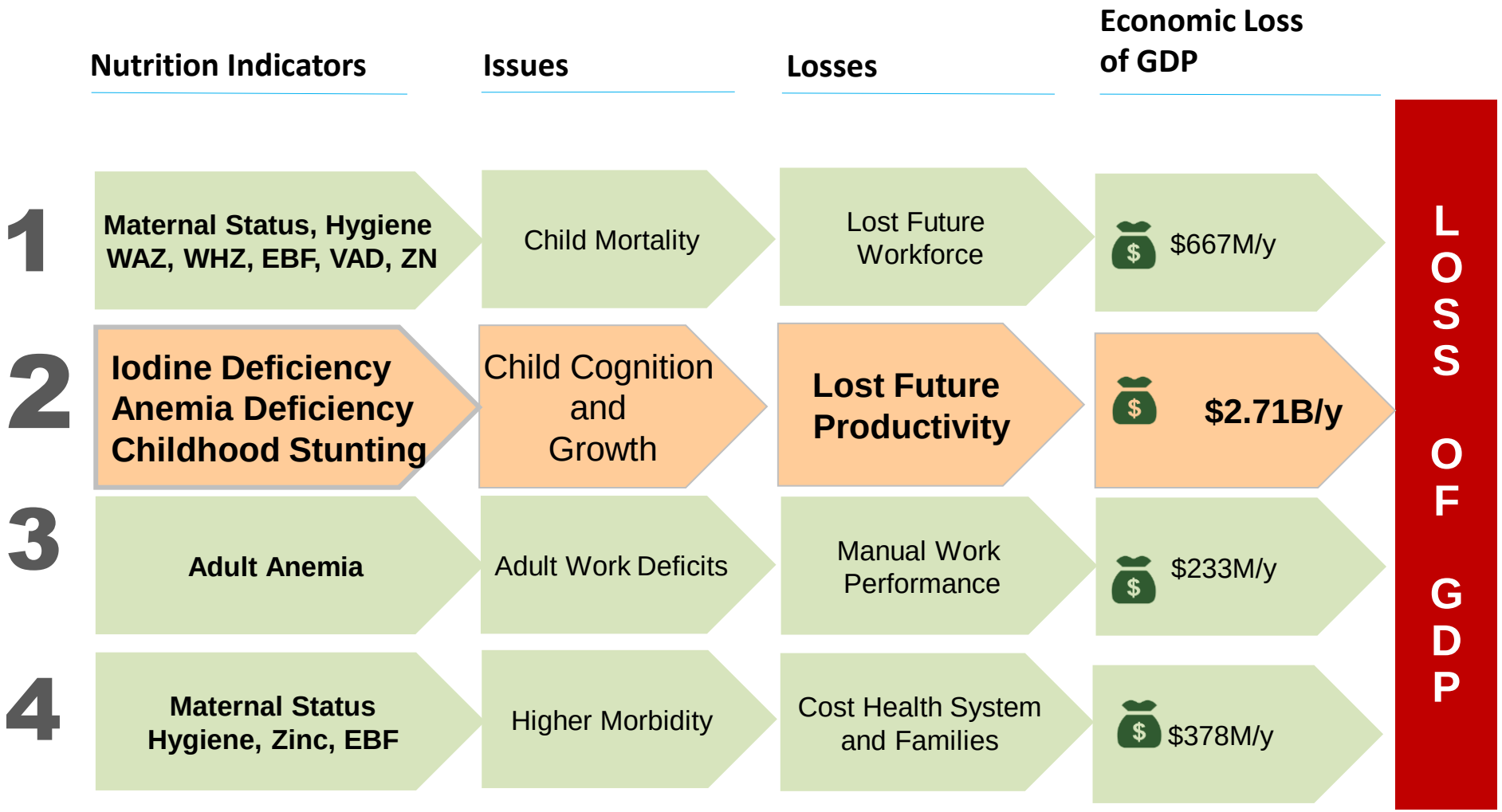
Philippines I High stunting prevalence



WHO cut-off values for public health significance of stunting prevalence:
> 40%: very high prevalence
30–39%: high prevalence of stunting
20–29%: medium prevalence;
<20%: low prevalence (red line)

Source: ASEAN/UNICEF/WHO (2016). Regional Report on Nutrition Security in ASEAN, Volume 2. Bangkok; UNICEF.

Which together other nutrition issues causes huge econo losses across 4 pathways



~$3.99 Billion/Year = 1.37% GDP

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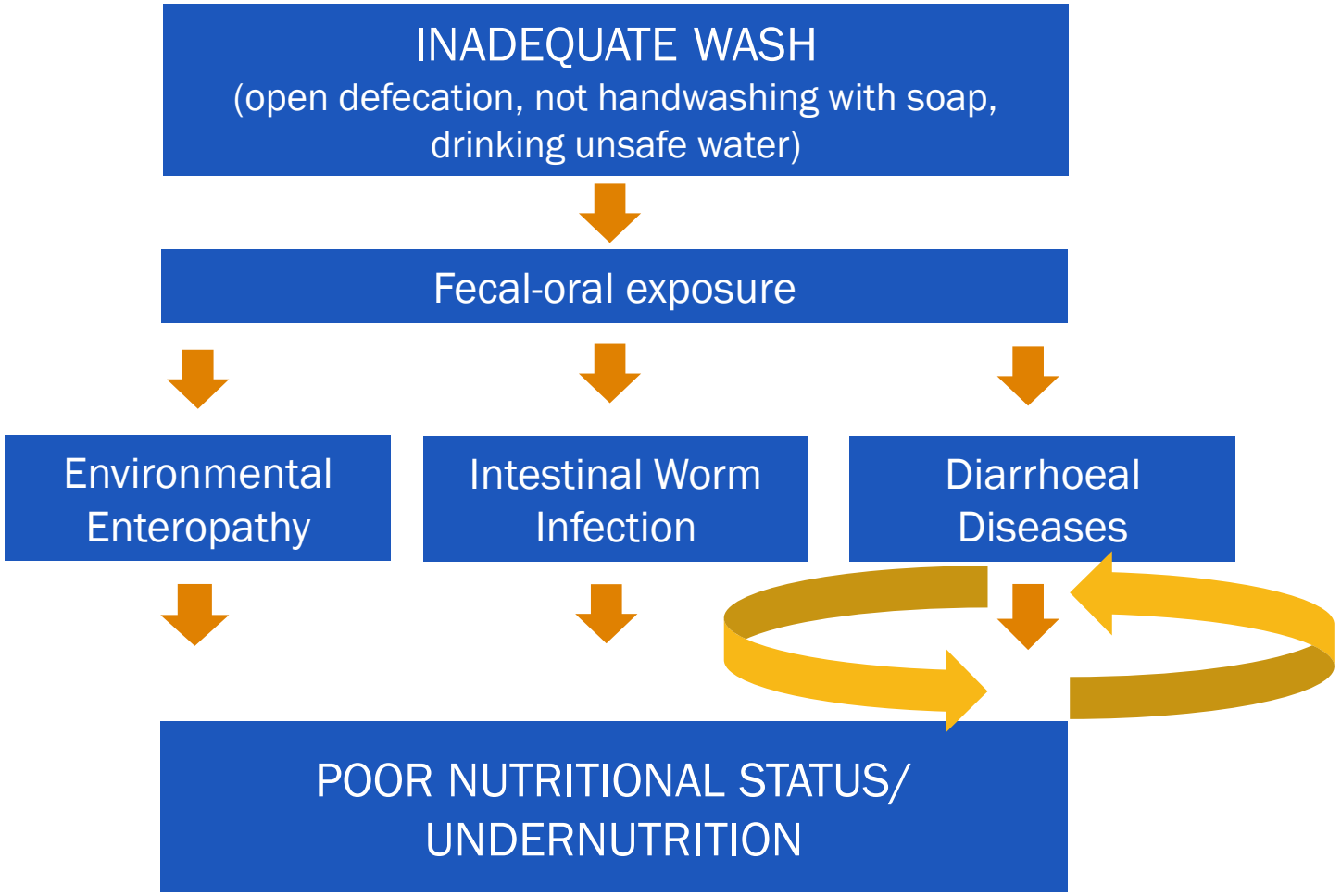
Undernutrition is a contributory to reduced school performance

- A predictor of grade failure
- Low birthweight may reduce IQ points by 5 percentage points
- Stunting may reduce IQ points by 5 to 11 points
- Iodine deficiency may reduce IQ as much as 10-15 points
- Iron deficiency may reduce IQ points by 9 points
- Sub-optimal breastfeeding in the first 6 months of life may reduce IQ by 4 points

WASH: Poor water, sanitation and hygiene conditions undermine child development



Source: "Linking toilets to stunting" Sanitation and Stunting Conference, Delhi School of Economics; O. Cummings LSHTM

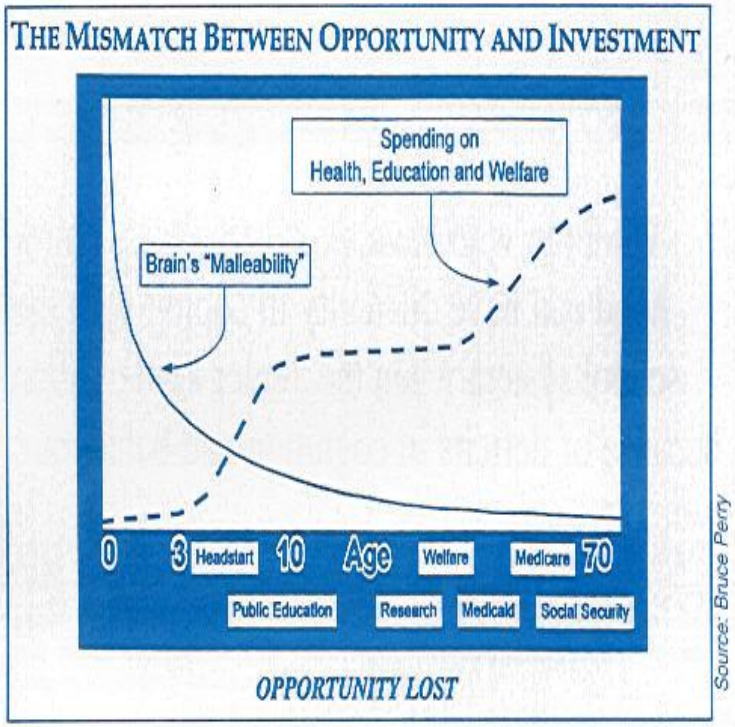
Child Protection: Relates to the prevention or response from child abuse in order to promote the child's well being

Laws Protecting Children in the Philippines

- Philippine Constitution (1987)
- Child and Youth Welfare Code-Presidential Decree No. 603 (1974)
- Special Protection of Children Against Abuse, Exploitation and Discrimination Act- R.A no. 7610 (1992)
- Anti-Violence Against Women and their Children Act of 2004- R.A. No. 9262

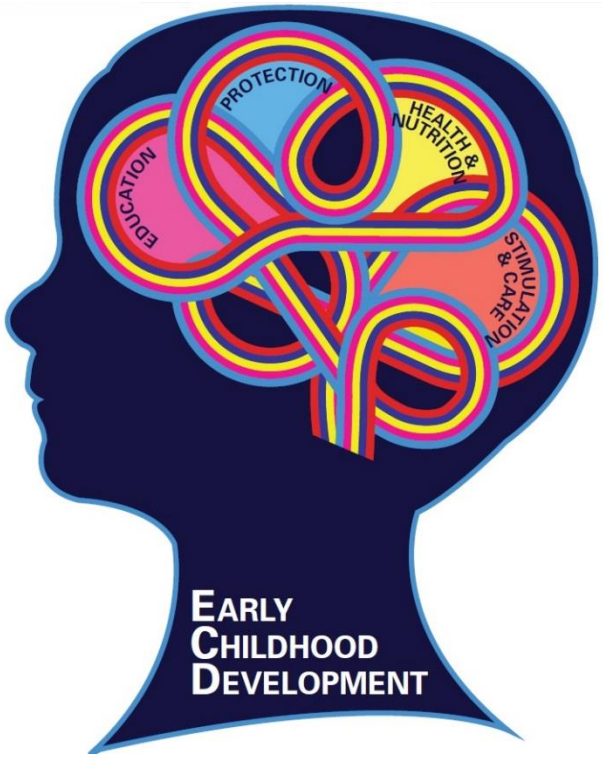
Early and Lifelong Learning: Early childhood learning lasts a lifetime - and yields broad dividends

The returns on investment to ECCD is up to 18% - much higher than rates of return of other levels of education (Nobel Laureate James Heckman)



…. but there is current mismatch between opportunity and investment in ECCD…

Key Message: Timing matters - early intervention is the answer



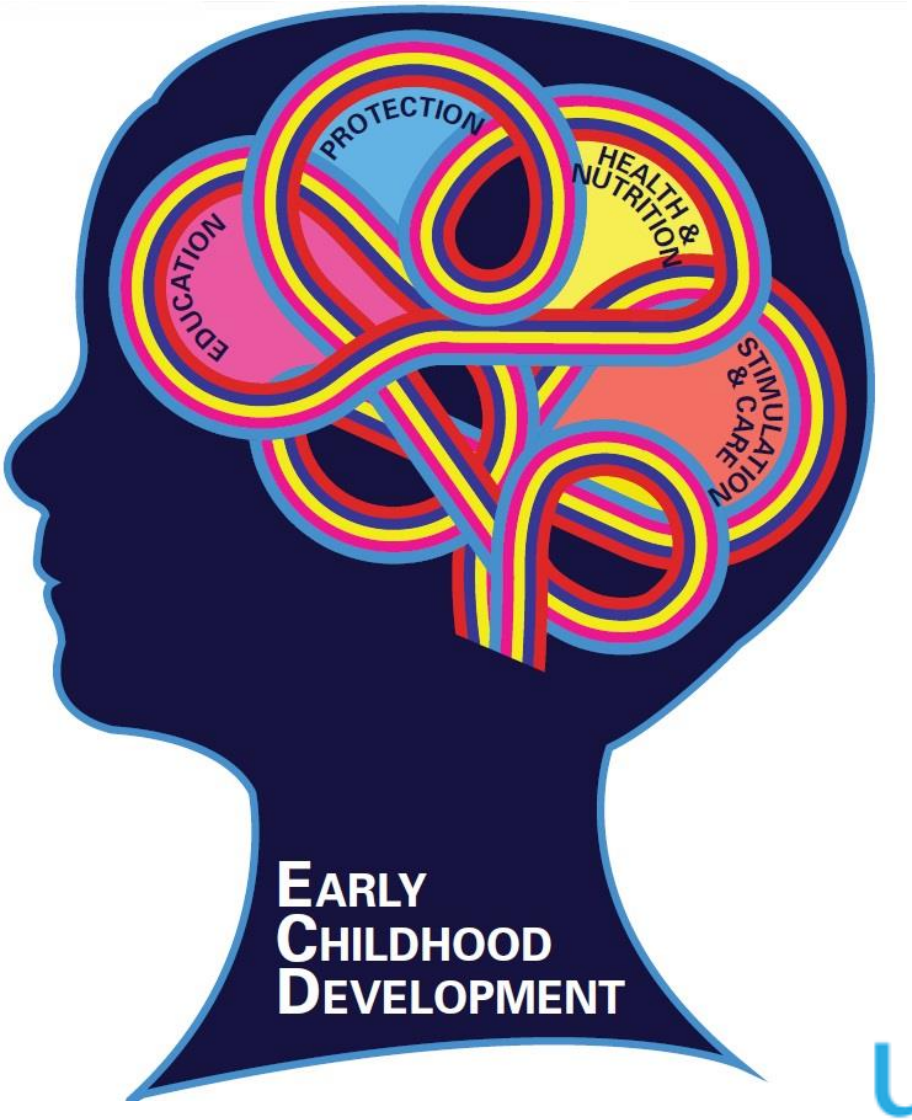
"interventions that happen when the brain is plastic are very effective"

- Good **nutrition** at the right time to feed and nourish the architecture of the brain during the sensitive periods of development.
- Good **nutrition, health and proper care** in the first 1000 days give the best start to life-forever.
- **Proper sanitation and hygiene practice** to ensure optimal mental and physical development and prevent stunting
- **Stimulation** and enrichment to spark neural connections across multiple regions of the brain to increase the brain's capacity and function.
- **Safety and protection** to buffer against stress and allow absorption of nutrition and growth of brains cells.

Integration of ECCD and nutrition is critical for a child's "holistic" development

- Both ECCD and nutrition share the same "window of opportunity" of the early years when delays in child development and growth are more easily reversible
- Nutrition and ECCD potentially work in synergy
- Promotion of good nutrition practices—esp., maternal nutrition and complementary feeding of children 6–23 months
- The health system could provide means to reach children with ECCD services in the early years
- While exclusive breastfeeding rates have improved slightly, dietary diversity and feeding practices remain poor and stunting rates continue to be high

A child with such an Inter-related brain is going to need coordinated, multi-sectoral actions!



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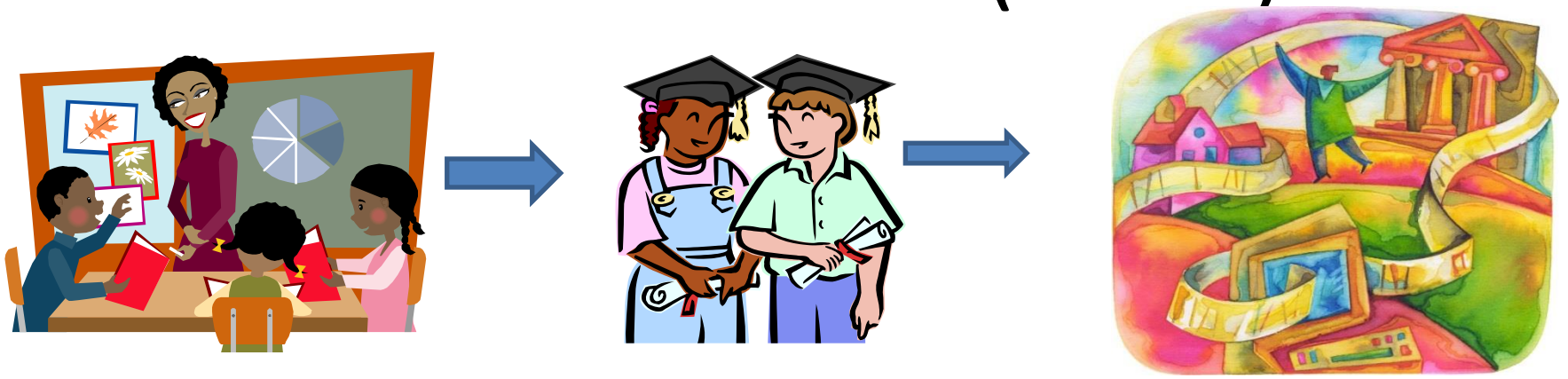
Benefits of ECCD

- ✓ ECCD is a cost-effective strategy to promote children's success in school and life

Children who attend quality ECCD:

- *are more ready to learn when they start in school;*
- *are less likely to repeat grades or drop-out of school;*
- *perform better in school; and*
- *become productive members of the community*

Benefits of ECCD (cont..)



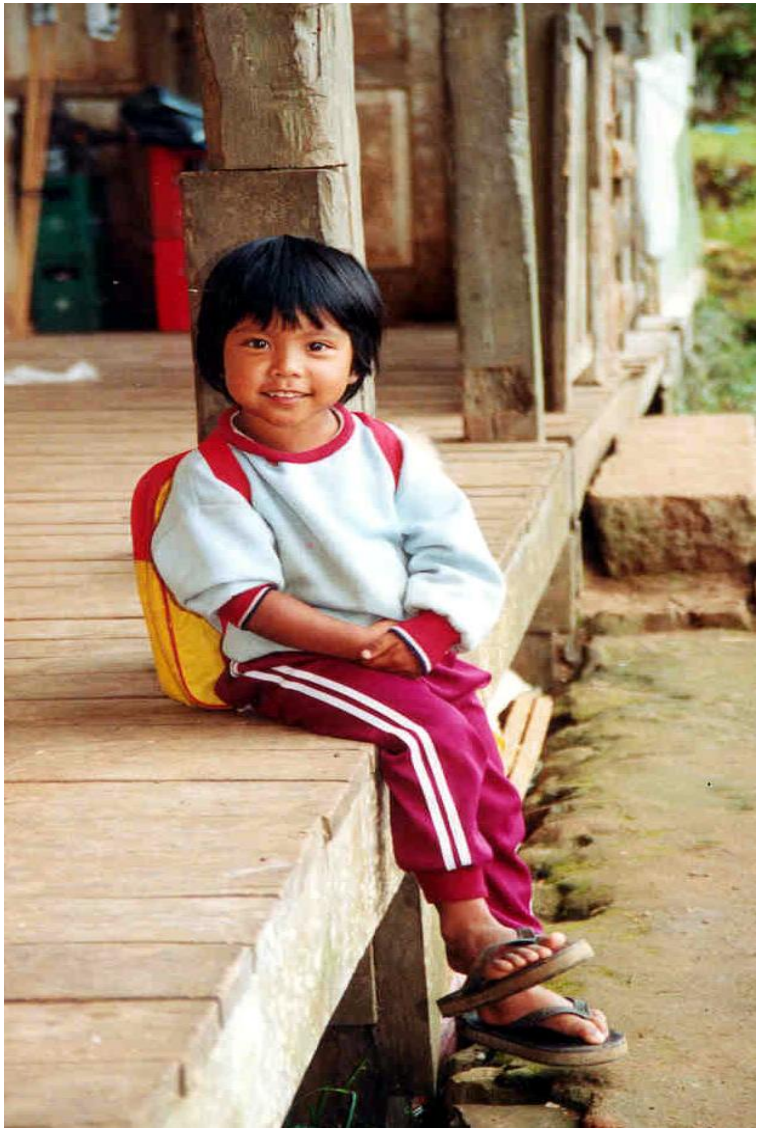
- ✓ Returns of investment to ECCD is up to 18% -much higher than rates of returns of other levels of education

- ✓ ECCD interventions benefit the poorest and most disadvantaged children the most even though they are the least likely to have access to ECCD

- ✓ Therefore, the impact of ECCD is not only limited to childhood per se but influences the entire LIFE !

Invest in Essential Nutrition Actions in your Annual Investment Plan

- Protect and promote optimal infant and young child feeding practices
- Ensure adequate supplies of micronutrients are accessible in all health centers
- Prioritize the procurement and distribution of growth monitoring tools



It pays to invest in ECCD!


Thank you!
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