



Early Childhood, Human Development and Society

Dr Clyde Hertzman

International Commission on the Social Determinants of Health



“The goal is not an academic exercise, but to marshal scientific evidence as a lever for policy change — aiming toward practical uptake among policymakers and stakeholders in countries”.

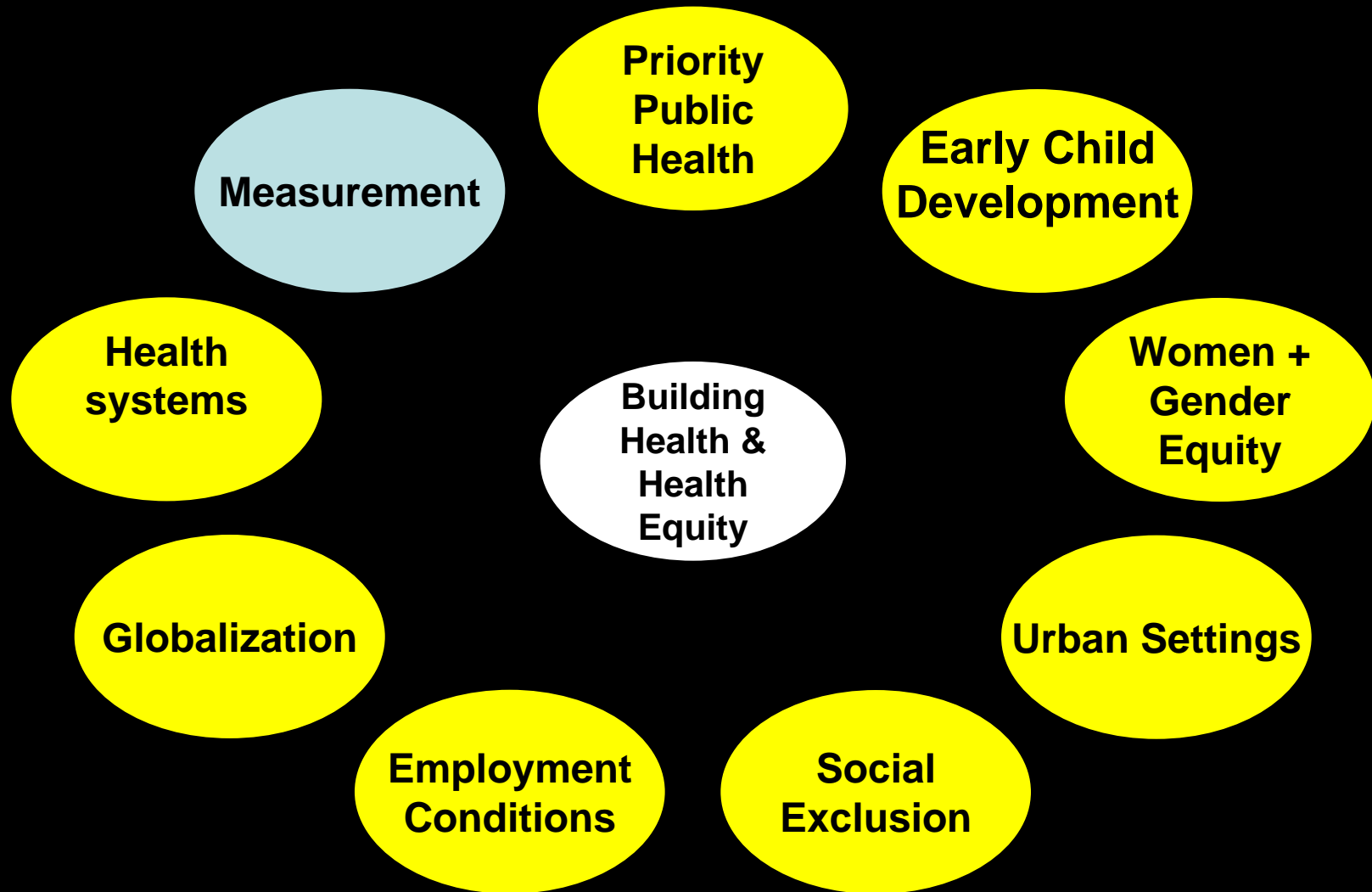
WHO Director-General LEE
Jong-Wook’s address to the
World Health Assembly, May 2004

**What good does it do to treat
people's illnesses ...**



*...then send them back to the conditions
that made them sick?*

KNOWLEDGE NETWORK THEMES



**Why is Early Child Development a
'Social' Determinant of Health?**

ECD depends upon the experiences children have in the environments where they grow.

What is experience?

Everything that you encounter both pre- and postnatally as well as in adulthood...

Examples: sounds, touch, vision, smell, food, thoughts, drugs, injury, disease...

Early Reading Program?



Which environments matter?

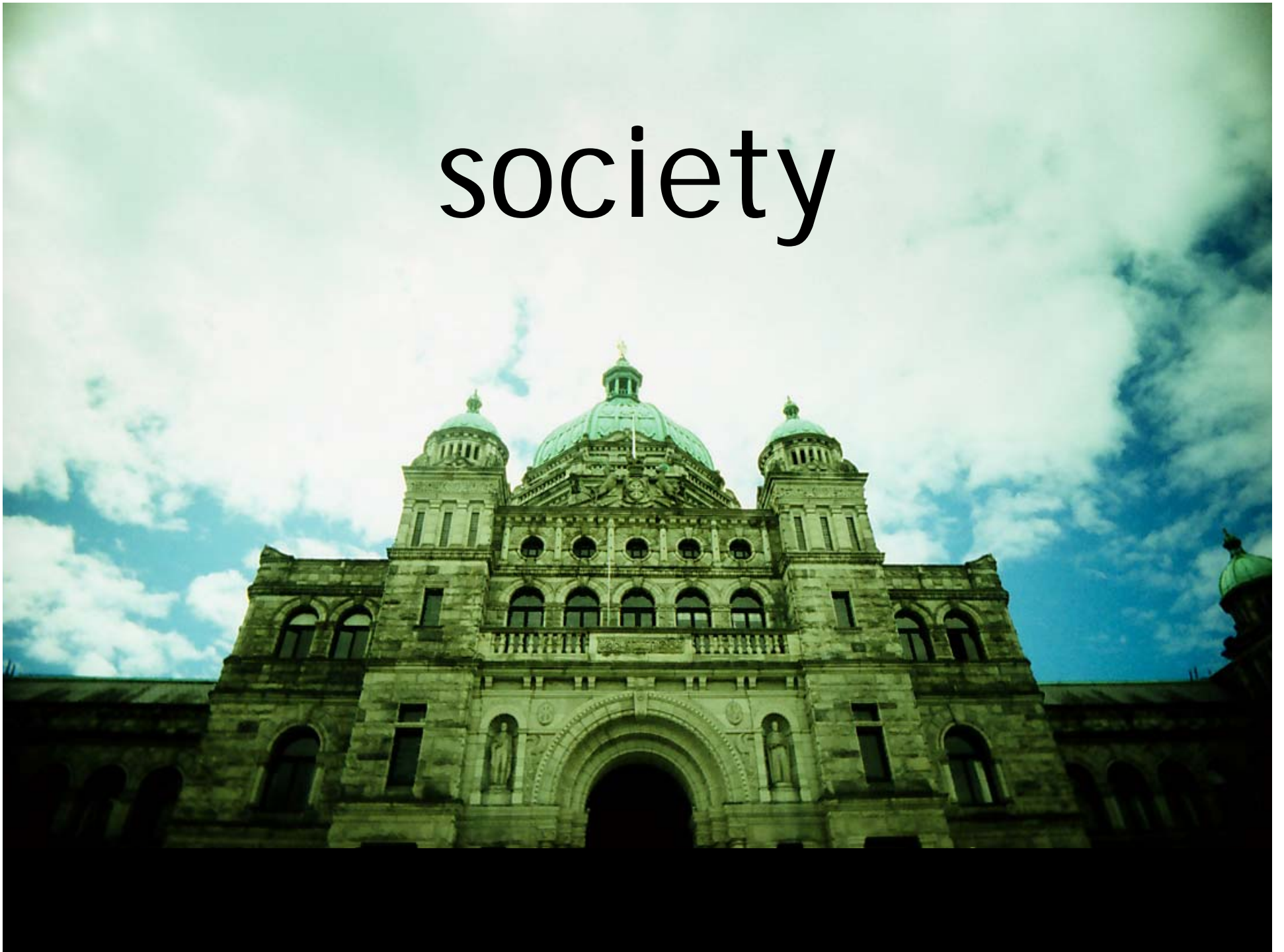
family



neighbourhood



society

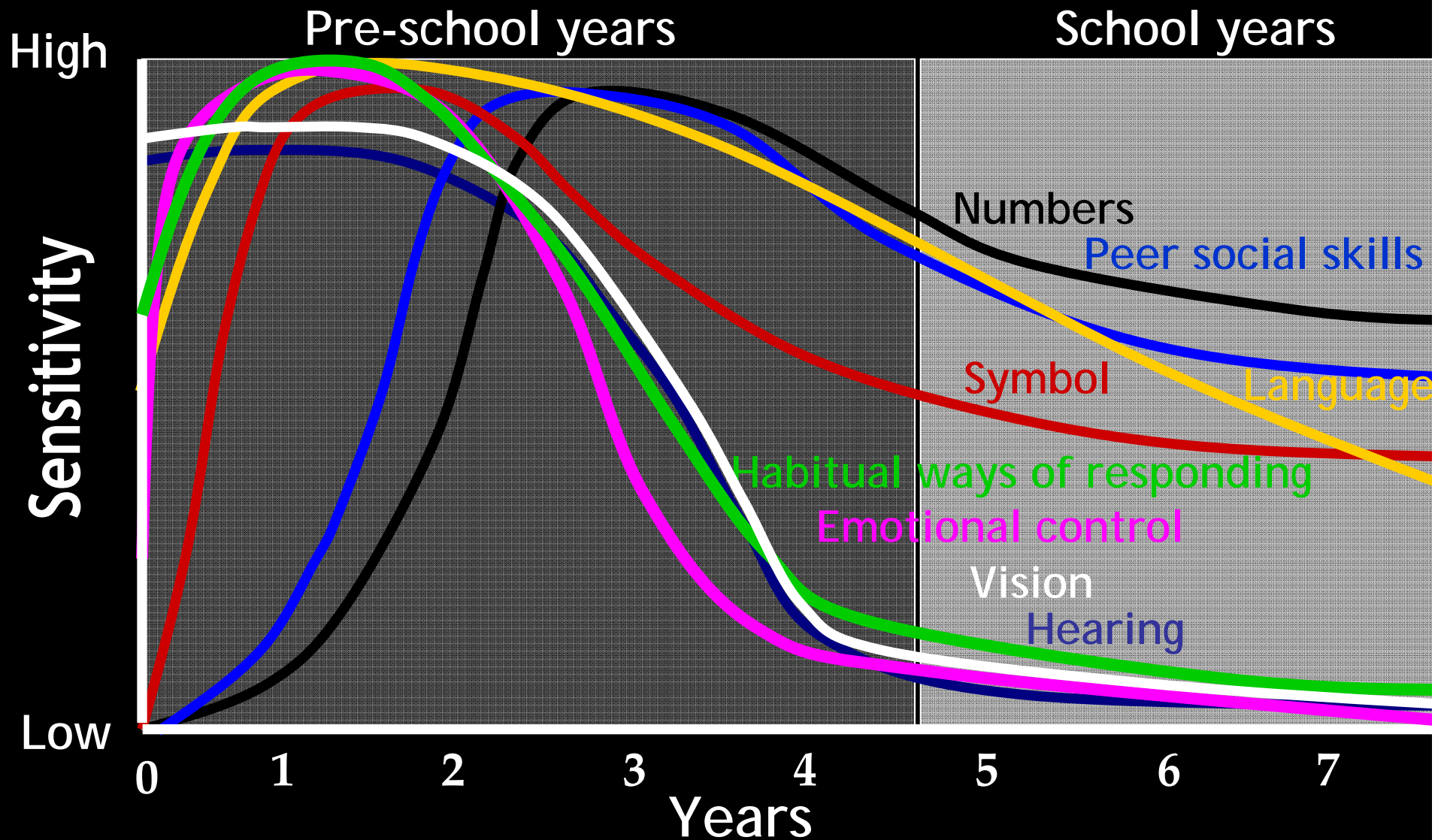


**What did the ECD
Knowledge Network tell the
Commission?**

ECD Knowledge Network

- Three broad domains of early development -- physical, social/emotional, language/cognitive -- influence health, well-being, learning and behaviour over the life course
- Biological Embedding-- early environments 'get under the skin' and change human biology in ways that help explain the influence of ECD on the life course

Sensitive Periods in Early Brain Development



Graph developed by Council for Early Child Development (ref: Nash, 1997; *Early Years Study*, 1999; Shonkoff, 2000.)

HPA Pathway, ECD & Stress

Cortisol – Over Production

Behaviour (ADHD, violence), depression, diabetes, malnutrition, cardiovascular disease, memory, immune system, drug and alcohol addiction

Cortisol – Under Production

Chronic fatigue syndrome, fibromyalgia, immune system (autoimmune disorders) rheumatoid arthritis, allergies, asthma

HPA Pathway and Sensory Experience in Early Life

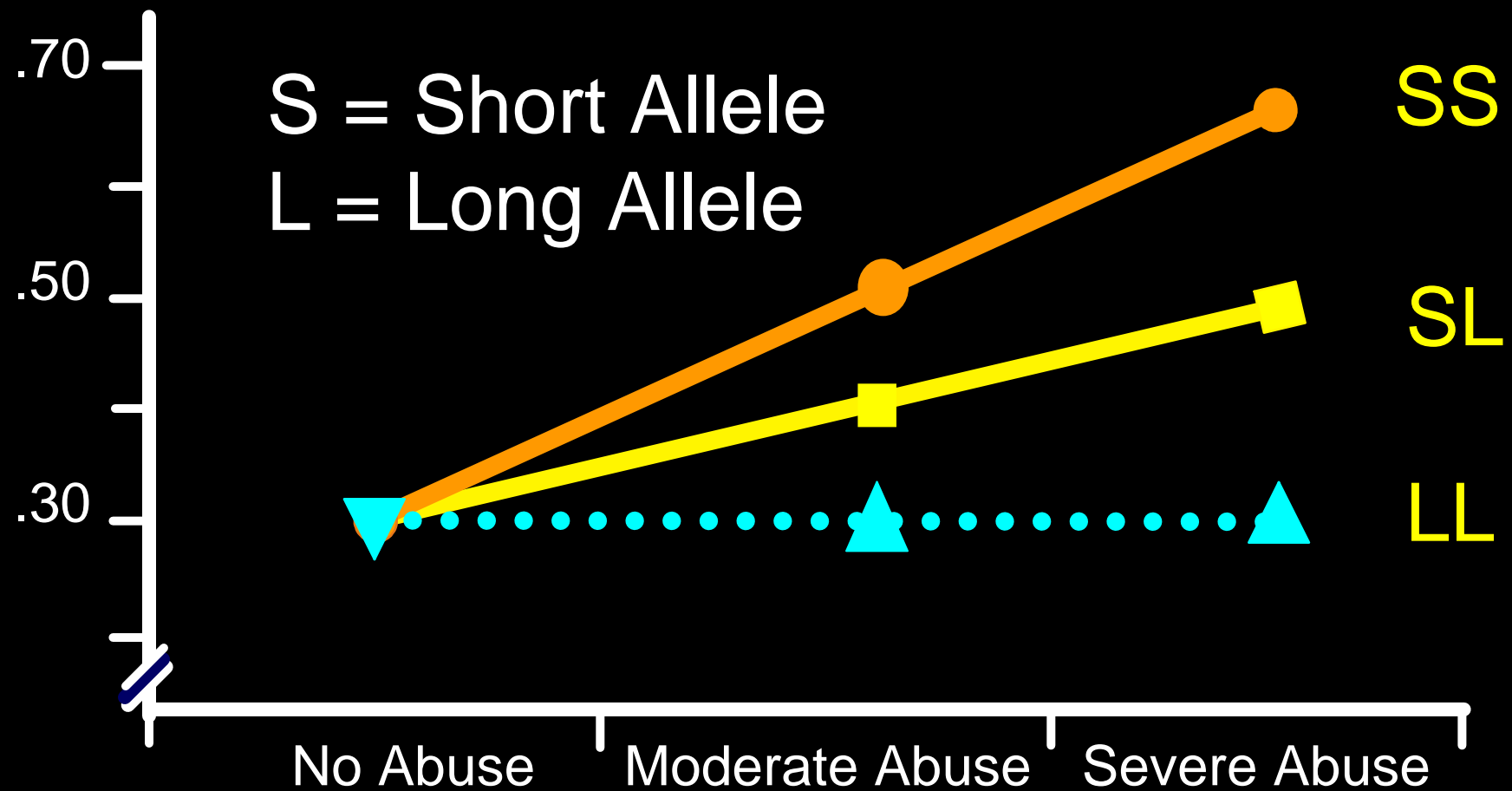
Touch and other experiences in the early period are critical

- Rats – Mothers licking pups
- Monkeys – Peer vs mother rearing
- Humans - Attachment

Serotonin Transporter Gene Experience in Early Life - Depression

Depression
Risk

Age 26



Early Childhood

A. Caspi, Science, 18 July 2003, Vol 301.

Early Experience, Brain Architecture and Function

- Affects gene expression and neural pathways
- Shapes emotion, regulates temperament and social development
- Shapes perceptual and cognitive ability
- Shapes physical and mental health and behaviour in adult life
- Shapes level, success of physical activity
- Shapes language and literacy capability

Early Child Development: *A Powerful Equalizer*

Final Report



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Overarching Messages

1. Transactional environment is the principal social determinant of healthy child development.
2. Because of sensitive periods in brain development, early environments are the most powerful determinant of basic competencies.
3. Early development goes on to influence health, in different ways, across the life course.
4. **Inequities in ECD have the capacity to threaten the level of competency needed for societal survival.**

What the Commission recommended

“Equity from the start”

What the Commission recommended

Commit to and implement a comprehensive approach to early life, building on existing child survival programs and extending interventions in early life to include social/emotional and language/cognitive development.

What the ECD-KN Recommended

- 1. The World Health Organization's unique contribution to early child development globally**
- 2. Generating the necessary commitment at multiple levels of society**
- 3. Structural requirements for implementation**
- 4. Strategies for implementation**
- 5. Monitoring processes and outcomes related to ECD**
- 6. Creation of a Global Alliance for Early Child Development**

Pie in the Sky?

The example of Chile

What is Chile doing?

Chile Crece Contigo

+ JUNJI

+ Junaeb

+ Income/Workplace/Neighborhood

= “the Chilean System”

5. Monitoring

- expand evidence base in resource-poor countries
- gov't held accountable for universal birth registration
- local NGOs to monitor access to quality ECD services
- gov't/international agencies to fund monitoring of programs and ECD outcomes

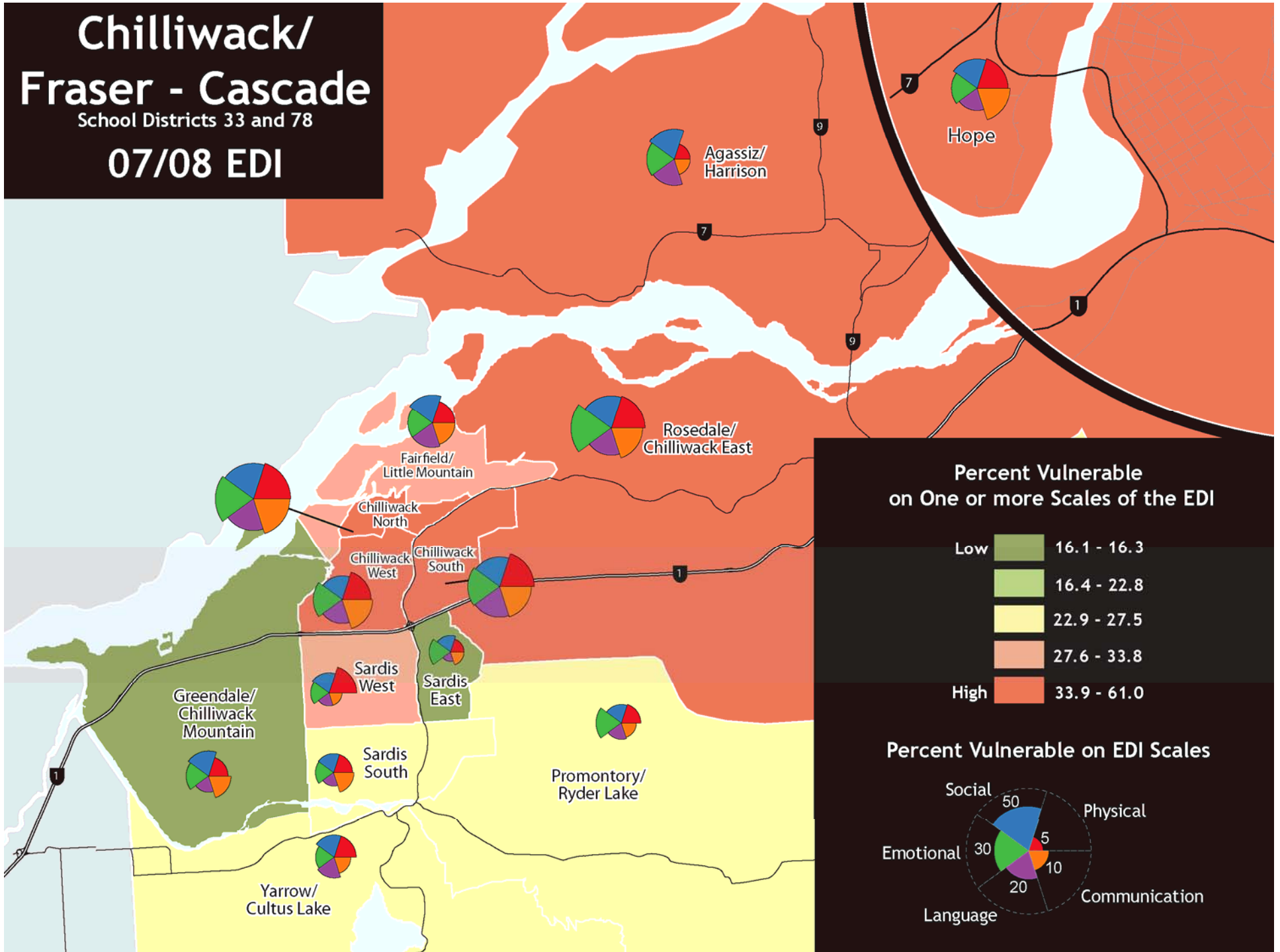


The Early Development Instrument

Chilliwack/ Fraser - Cascade

School Districts 33 and 78

07/08 EDI

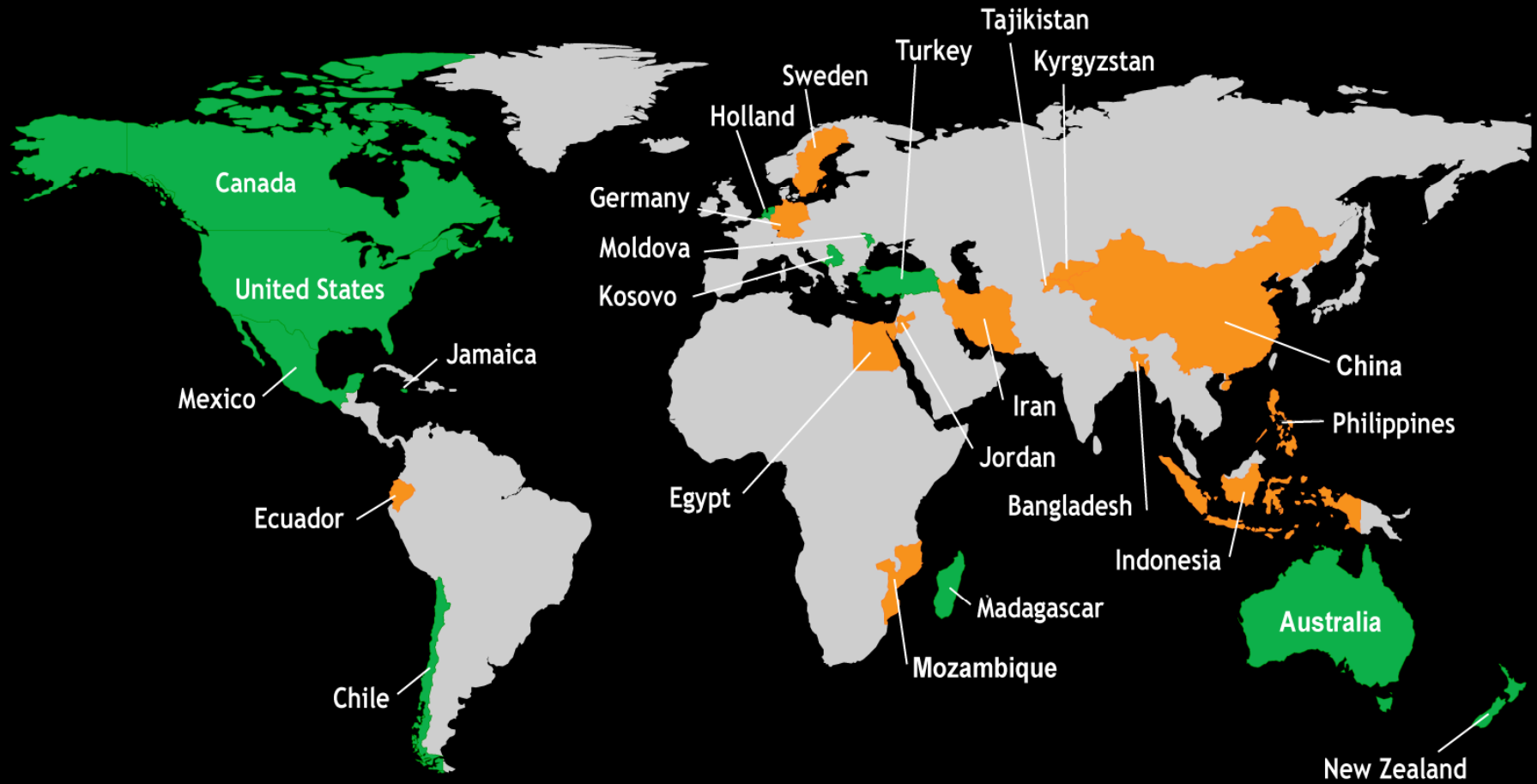


Why is the EDI important?

No measurement, no data.....

No data, no problem!

EDI Countries Around the World



Implemented
Planning

Developmental Trajectories

Birth and Beyond



Pre-Natal

Infancy → Early Childhood → Middle Childhood → Adolescence



Early
Development
Instrument



Middle-years
Development
Instrument



EDI



MDI

Middle-years Development Instrument (MDI)

Social and Emotional Competence

Connectedness

School Experiences

Physical Health and Well-being

Constructive Use of Time

Can we improve things?

Yes, we can!



We sorta have-to.

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