

Giving Queenslanders the Best Start

Dr Elisabeth Hoehn
QMHC Leading Reform 2018 Summit

Queensland Centre for Perinatal and Infant Mental Health

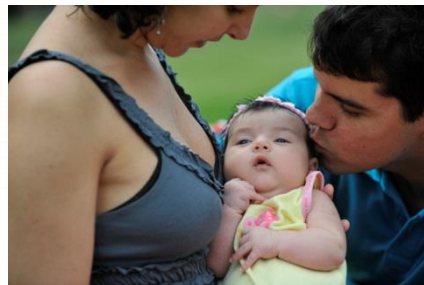


The Evidence Is In

Early relationships matter and are crucial for a healthy, compassionate and productive society.



Good mental health and wellbeing – a goal for Queensland

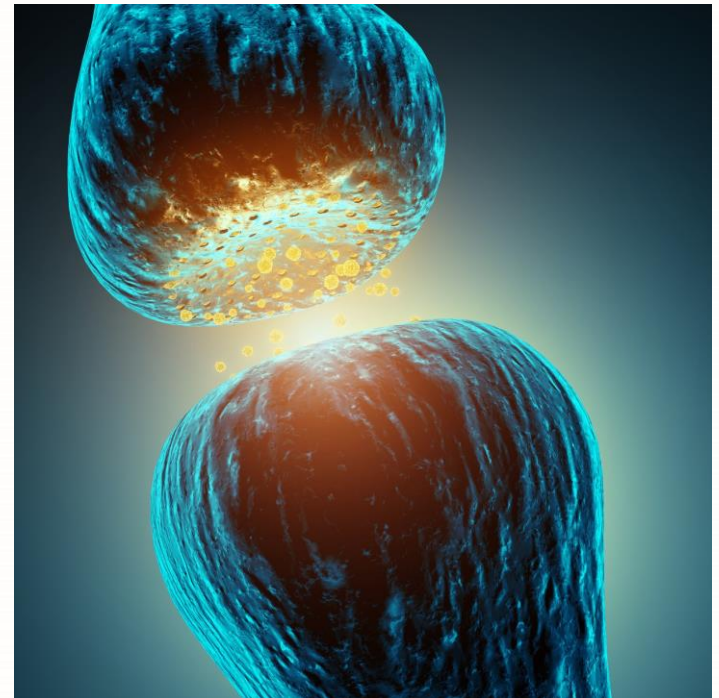


A capacity for
intimacy &
productivity

During the first 1000 days (conception to age 2), the developing foetus and infant are at their most adaptable but also at their most vulnerable

Mind, brain and body function as integrated systems and affect one another

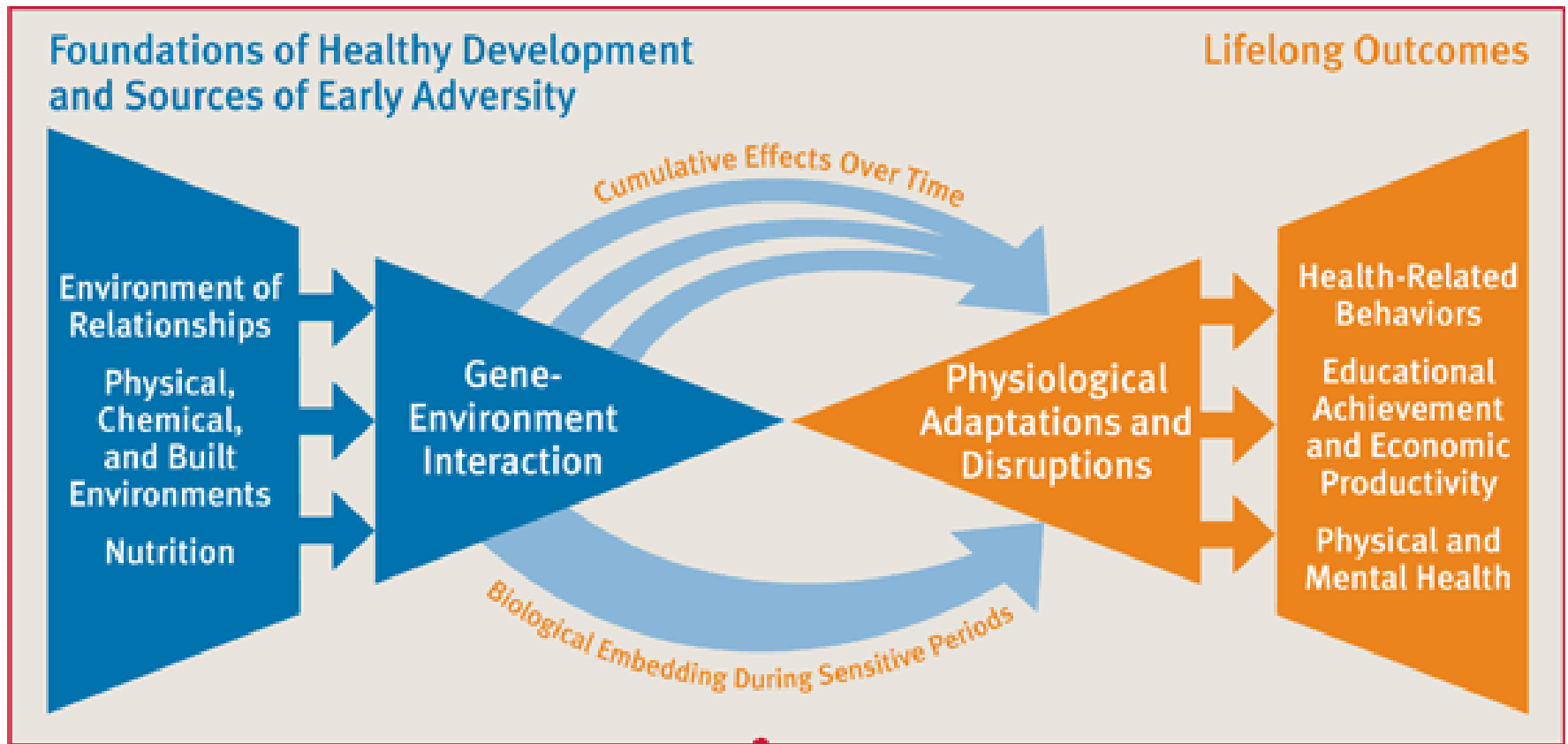
The first 1000 days is the critical period for biological embedding of brain and central nervous system development, critical to future mental health and wellbeing



Child, family, community and social factors shape health and development in the first 1000 days



Maternal health including nutrition, drug use, stress and mental illness can negatively affect the development of the foetus in the womb



Center on the Developing Child
HARVARD UNIVERSITY

www.developingchild.harvard.edu

Five Numbers to Remember about Early Childhood Development

+1,000,000
MORE THAN 1 MILLION

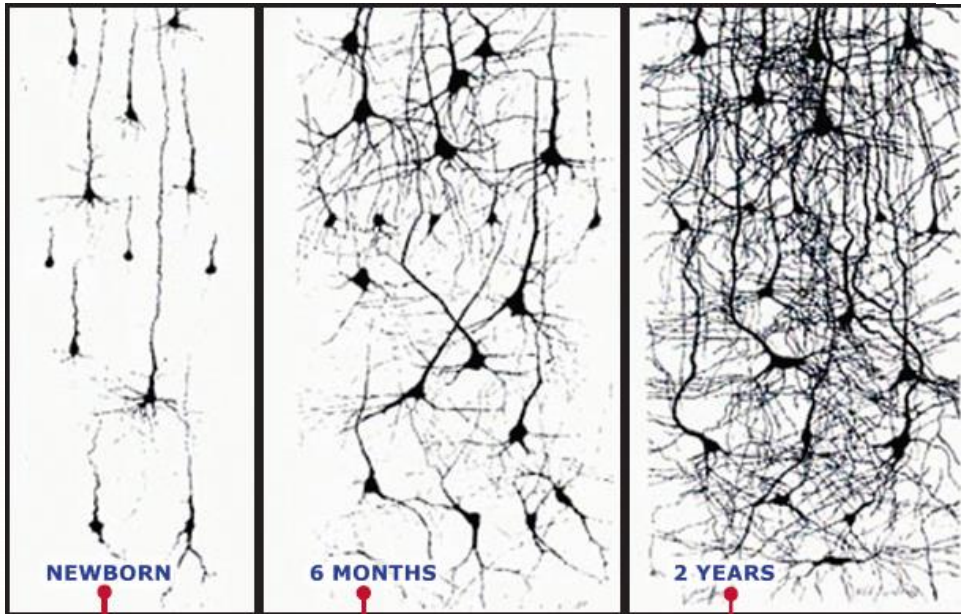
18
18 MONTHS

90-100
90-100%

3:1
3:1 ODDS

4-9
4-9 DOLLARS

+1,000,000 MORE THAN 1 MILLION

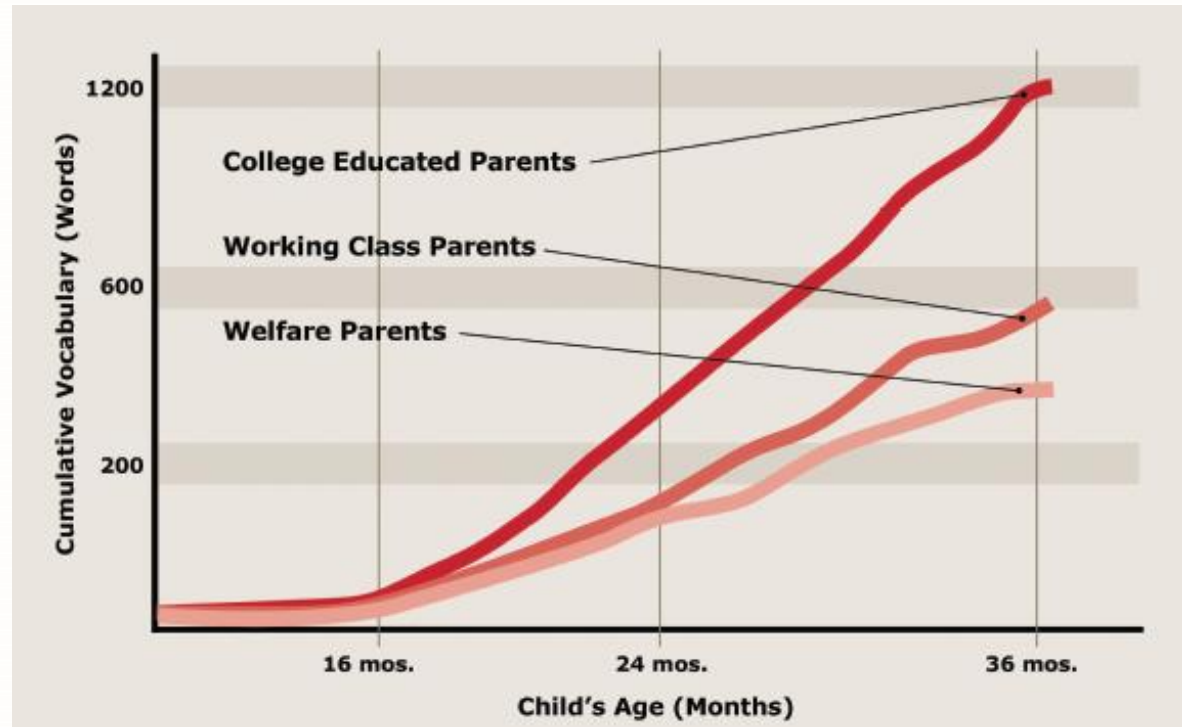


Conel, J.L.
*The Postnatal development
of the Human Cortex.*
Cambridge, Mass: Harvard
University Press, 1959.

- More than 1 million new neural connections a second in the early years
- Formed by interaction of infant's genes & environment & experiences
- Connections build brain architecture

18 MONTHS

Hart, B.S. and Risley, T.R.
(1995) *Meaningful
Differences in the Everyday
Experience of Young
American Children.*



- At 18 months of age disparities in vocabulary begin to appear

Bucharest Early Intervention Project

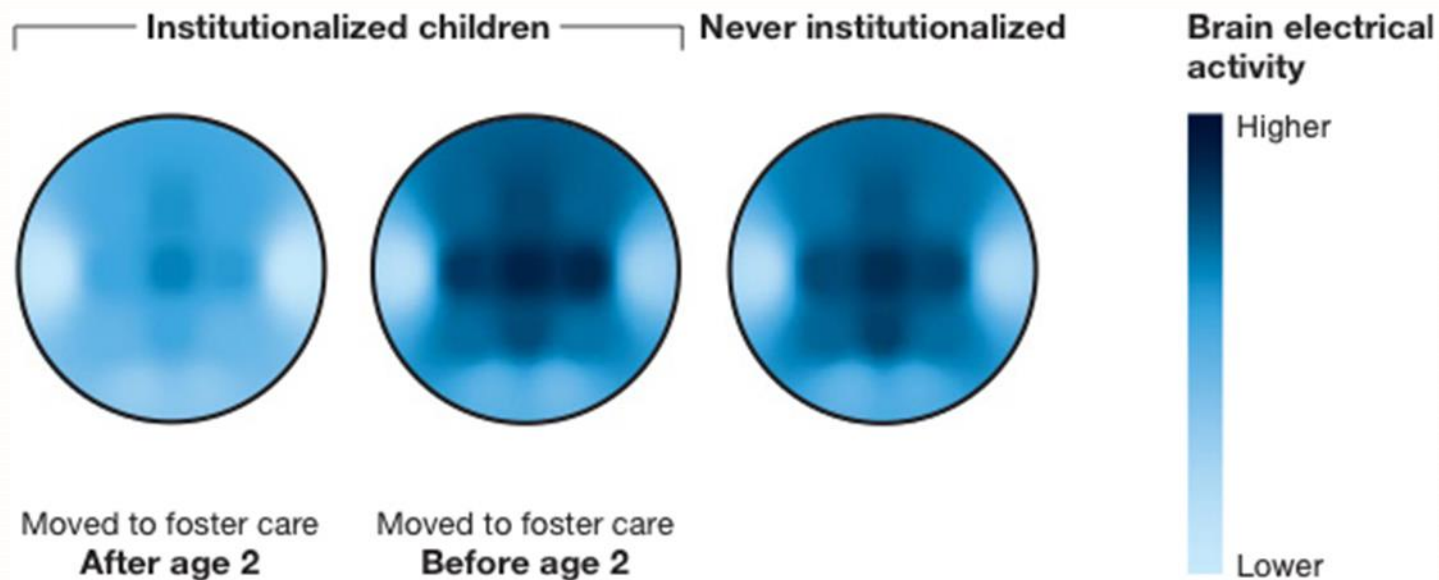
18 MONTHS

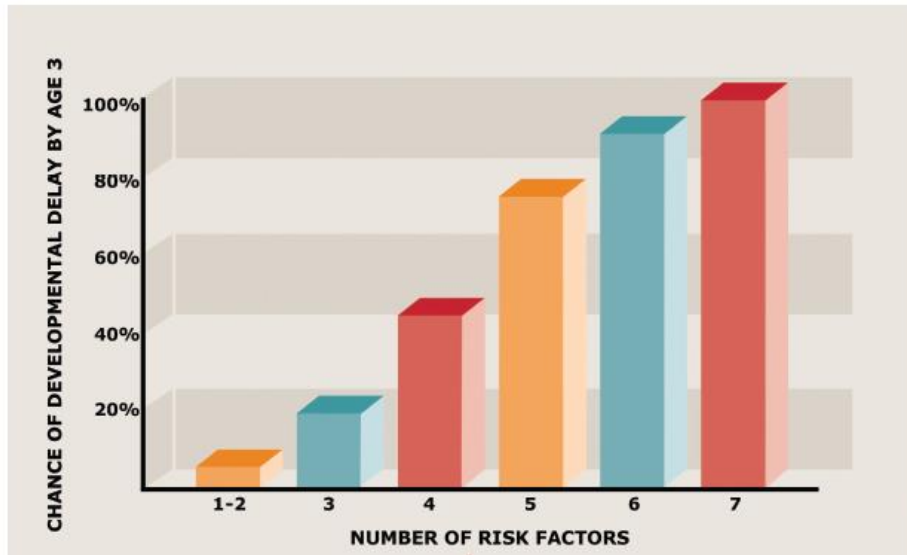
- Researched effects on adopted and fostered Romanian orphans
- Children placed in foster care before 24 months of age have more secure attachments at 42 months than if placed after 24 months. The earlier children were placed in foster care, the less likely they were to show disorganized attachments.
- Although sensitive periods for recovery vary by domain, results suggest placement before age 2 is key.

Bucharest Early Intervention Project

18
18 MONTHS

- The amount of brain activity in the earliest years affects how much there is later in life.
- EEG scans of 8-year-olds: institutionalized children not moved to a nurturing foster care environment before they were 2 years old show less activity than those who were





90-100 90-100%

Barth et al, 2008

- Risk factors - poverty, caregiver mental illness, child maltreatment, single parent, low maternal education - have a cumulative effect
- Young children experiencing 6-7 risk factors = 90-100% chance of developmental delays

Fraser Mustard: Investing in the Early Years

- Drew urgent attention to the vital importance of the early childhood years in developing healthy, capable and confident children and adults for a nation's future prosperity.
- “The challenge for all societies is to close the gap between what we know about the determinants of early child development and what we do”

Fraser Mustard: Investing in the Early Years

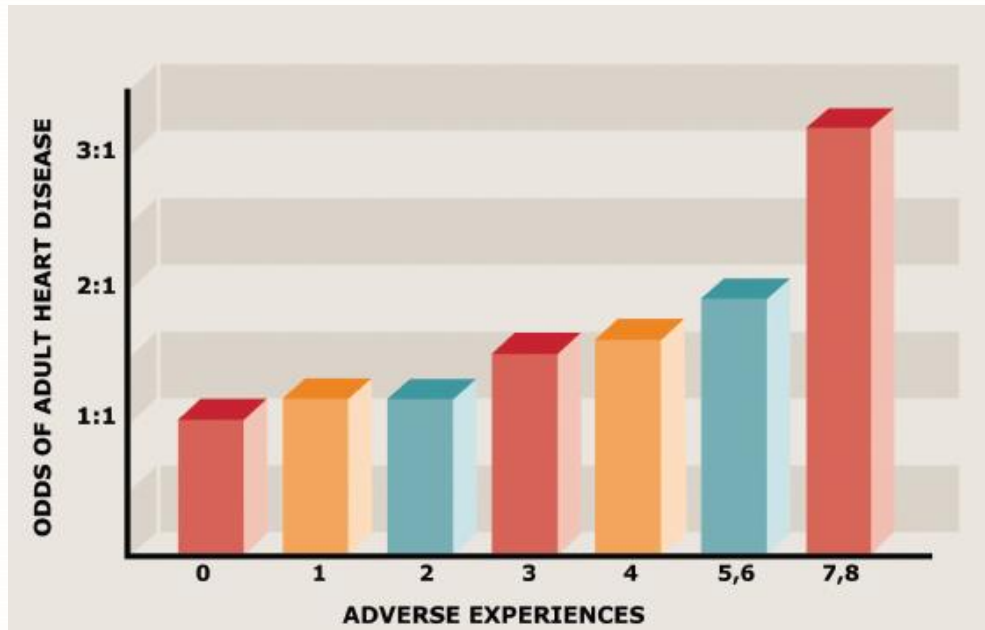
The Early Years Study - Reversing the Real Brain Drain

Fraser Mustard, 1999

- early child development centres for young children and parents
- boost spending on early childhood education to same levels as K to 12
- provide programs for all income levels - middle-class children need these services too
- encourage local parent groups and businesses to set up these programs instead of government – whole-of-community approach
- early years are crucial to building a healthy and competent population



Coronary heart disease, stroke, diabetes and cancer are now being linked to pathways that originated in the first 1000 days



3:1
3:1 ODDS

Dong et al, 2004

- Early experiences affect long-term physical health
- Early childhood adversity impacts the body resulting in increased risk of adult diabetes, hypertension, stroke, obesity & some forms of cancer
- 3:1 odds of adult heart disease after 7-8 Adverse Childhood Experiences

Adverse Childhood Experiences in the first 1000 days can contribute to poor lifelong outcomes in physical health, mental health and beyond health



Adverse Childhood Experiences (ACE) Study

- One of the largest investigations ever conducted to assess associations between childhood maltreatment and later-life health and well-being.
- Categories of adverse childhood experiences include:
 - emotional abuse
 - physical abuse
 - sexual abuse
 - mother treated violently
 - household substance abuse
 - mental illness in household
 - parental separation or divorce
 - criminal household member
 - emotional neglect
 - physical neglect

Adverse Childhood Experiences (ACE) Study

- The ACE Study uses the ACE Score (count of total number of ACE) to assess total amount of stress during childhood.
- Almost two-thirds of study participants reported at least one ACE. More than 20% reported three or more ACE.
- Short- and long-term outcomes of these childhood exposures include a multitude of health and social problems.

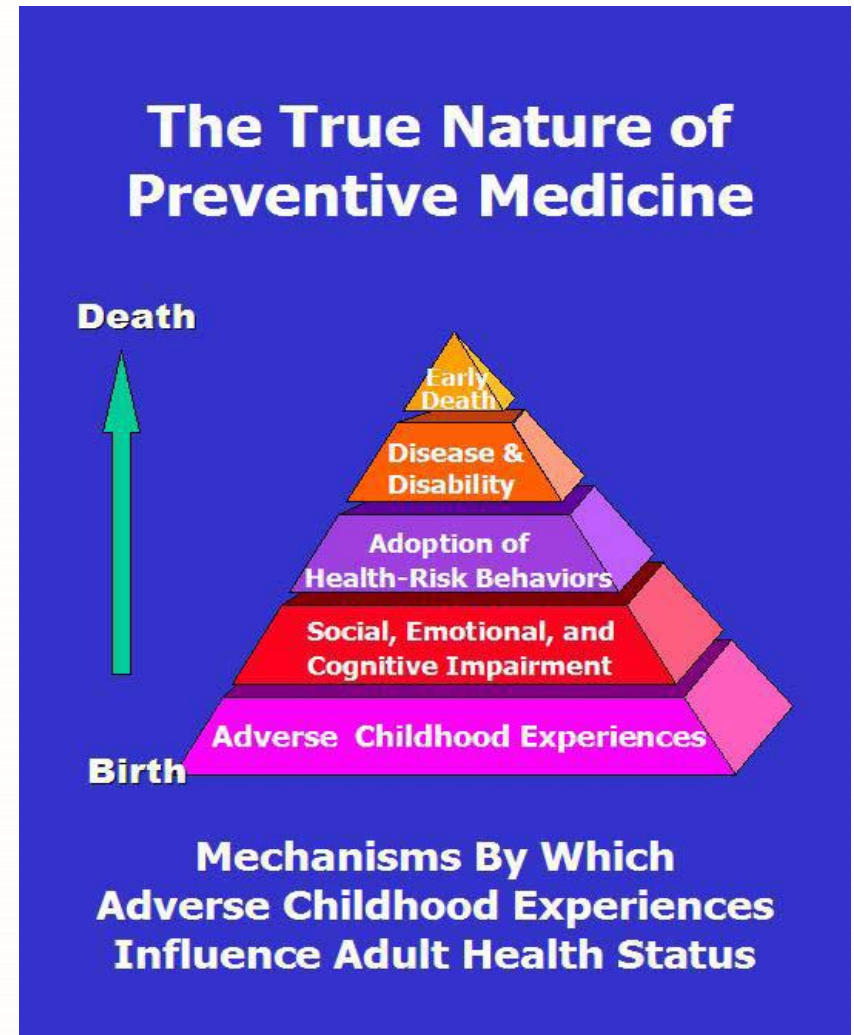
Adverse Childhood Experiences (ACE) Study

Cumulative effect of ACE factors on health:

If 4x ACE:

- 260% risk of COPD
- 240% risk hepatitis,
- 460% risk depression
- 1,220% risk of suicide attempt (80% of all suicide attempts attributable to ACE)

www.cestudy.org



Dunedin Multidisciplinary Health and Development Study

- Dunedin Multidisciplinary Health and Development Study - 32-year prospective longitudinal study of a representative birth cohort
- Children exposed to adverse psychosocial experiences have enduring emotional, immune and metabolic abnormalities that contribute to explaining their elevated risk for age-related disease

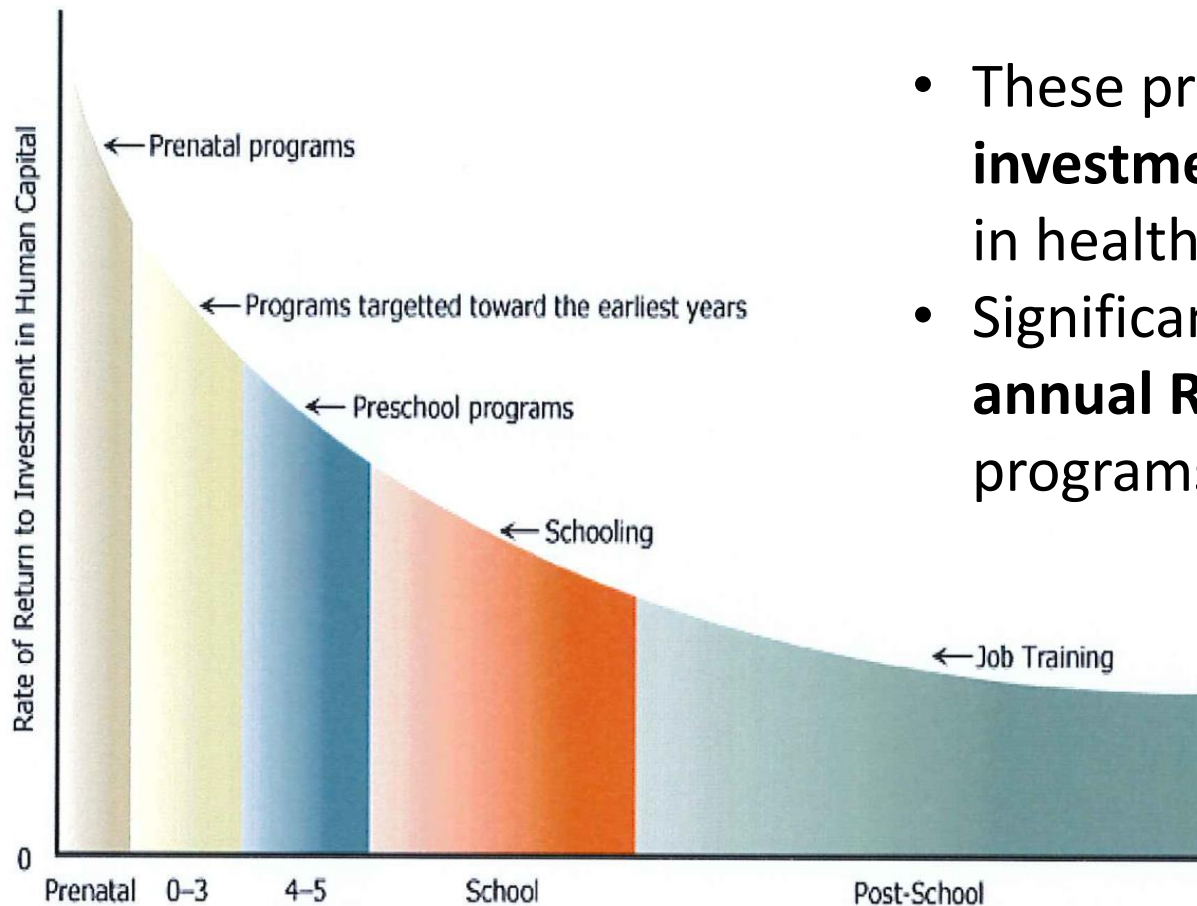
During the first 1000 days, development plasticity is at its greatest and remediation of adverse environments can be most powerful



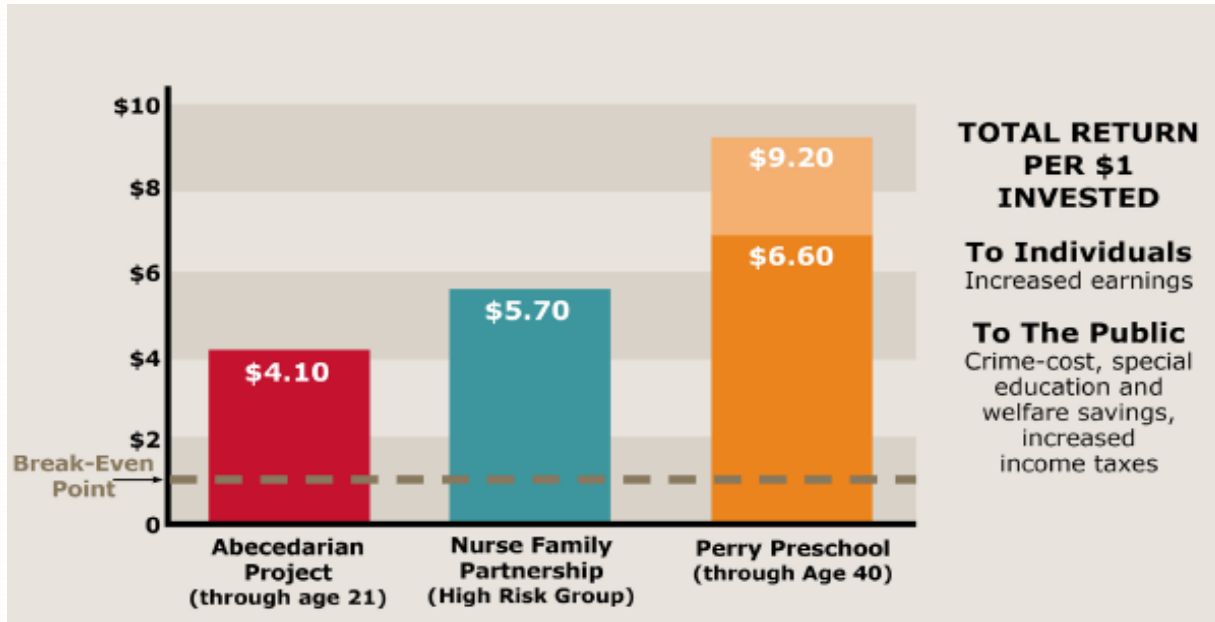
James Heckman, Nobel Laureate in Economics

4-9
4-9 DOLLARS

- Early health and learning programs, provided from birth to age 5, boost cognitive ability and social-emotional skills



- These programs **13% return on investment** per child per annum in health and social benefits
- Significantly higher than **7-10% annual ROI** for preschool programs alone



4-9
4-9 DOLLARS

\$4-\$9 return for every dollar invested in early childhood programs

- Masse, L & Barnett, WS, A Benefit Cost Analysis of the Abecedarian Early Childhood Intervention, 2002
- Karoly et al, Early Childhood Interventions: Proven Results, Future Promise, 2005
- Heckman et al, The Effect of the Perry Preschool Program on the Cognitive and Non-cognitive Skills of its Participants, 2009

James Heckman, Nobel Laureate in Economics

James Heckman, from *Lifecycle Benefits*

**Comprehensive, quality
early learning results in better
outcomes for males:**



**MORE
EDUCATION**



**BETTER
HEALTH**



**HIGHER
EMPLOYMENT/
INCOME**

Starting earlier provides greater returns. Learn more.

James Heckman, from *Lifecycle Benefits*

**Comprehensive, quality
early learning results in better
outcomes for females:**



**MORE YEARS
OF EDUCATION**



**HIGHER
GRADUATION
RATES**



**HIGHER ADULT
EMPLOYMENT/
INCOME**



**HIGHER
PARENTAL
INCOME**

Starting earlier provides greater returns. Learn more.

James Heckman, Nobel Laureate in Economics

James Heckman on Nurse-Family Partnership

Home Visiting:
Improved maternal mental health and parenting skills result in better outcomes for children.



Maternal investment and early health matter.

James Heckman on Nurse-Family Partnership

By the time children reach age 2, home visiting created:



BETTER MATERNAL MENTAL HEALTH



MORE POSITIVE PARENTING ATTITUDES



HEALTHIER HOME ENVIRONMENTS

Maternal investment and early health matter.

James Heckman, Nobel Laureate in Economics

James Heckman, from *Lifecycle Benefits*

High quality birth-to-five programs for disadvantaged children can deliver a

13%

Return on Investment

Starting earlier provides greater returns. Learn more.

James Heckman on Gender Effects

Providing low-income families with high quality childcare results in:



Quality matters in early childhood education. Learn more.

James Heckman, Nobel Laureate in Economics

PRESENTING THE HECKMAN EQUATION

INVEST in early education for disadvantaged children
+ DEVELOP cognitive skills, social abilities and healthy behaviors early
+ SUSTAIN early development with effective education through to adulthood
= GAIN a more capable and productive workforce

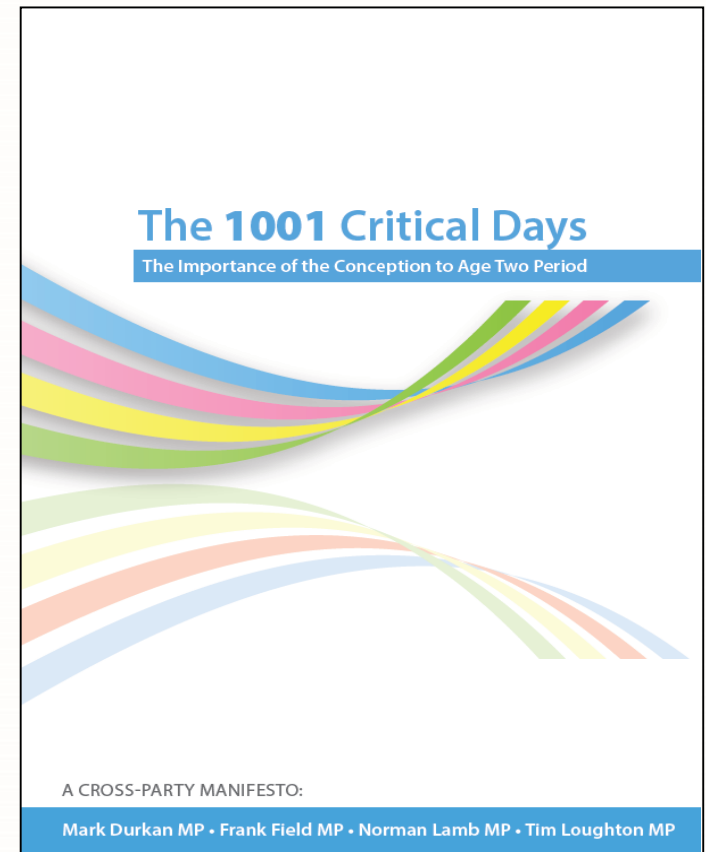
Essential Principles for Investing in Early Childhood Education

- ✓ Focus on disadvantaged families
- ✓ Start at birth
- ✓ Integrate health
- ✓ Develop cognitive *and* character skills
- ✓ Encourage local innovation in quality programs from birth to five

James Heckman
Nobel Laureate in Economics,
On the Strong Start for America's Children Act

1001 Critical Days Manifesto

- Politicians from across the political spectrum in UK came together to acknowledge the importance of the period from conception to age 2
- Pledged to work together to ensure all babies have the best start in life
- Placed a focus on the early years at the heart of policy making
- Cross-party manifesto recognising that without a focus on prevention and early intervention, future costs in managing the consequences will continue to rise



A whole-of-government systemic approach is needed to provide every Queensland child with the best possible start in life



Such an approach will produce better outcomes for children as well as social and economic benefits for the community

"Early childhood development is perhaps the strongest investment we could make on a raw return-on-investment basis."

James Heckman

Nobel Laureate in Economics