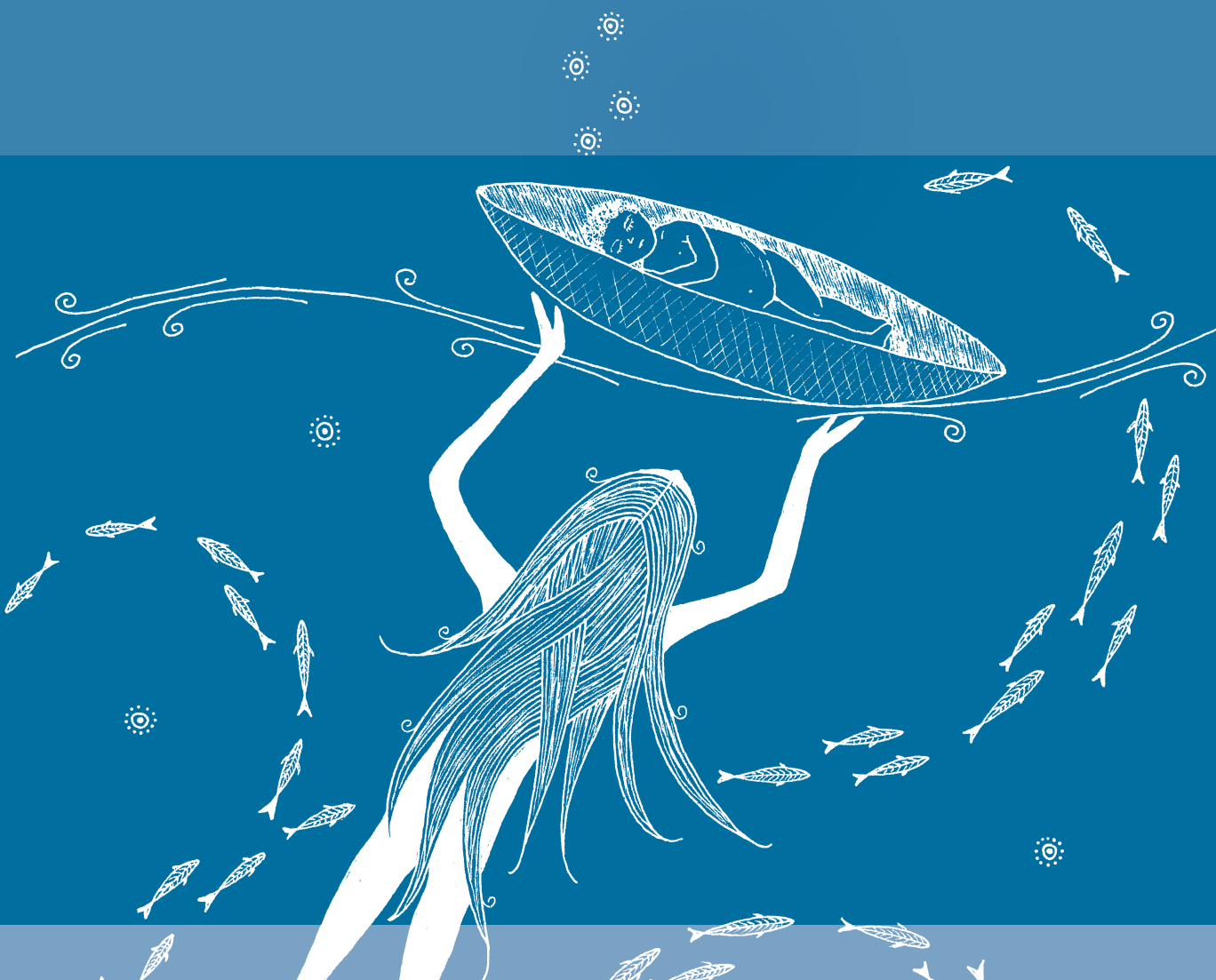


Good Beginnings: Getting it right in the early years

Review of the evidence on the importance of
a healthy start to life and on interventions to
promote good beginnings

A report prepared for the Lowitja Institute

Lance Emerson, Stacey Fox and Charlene Smith
July 2015



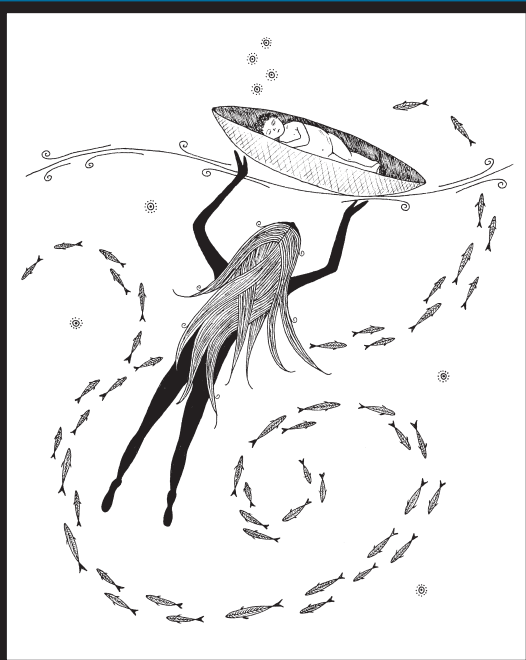
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Healthy Child, Strong Community, 2015

© **Shawana Marie Andrews**

ink on paper, 210 x 297mm

Mother ocean (woman) supports and holds the child. Ancestors and Elders past (circles below water) provide generations of knowledge. Community (fish) protects the child. Strong child provides for generations to come (circles above basket).

Artist biography:

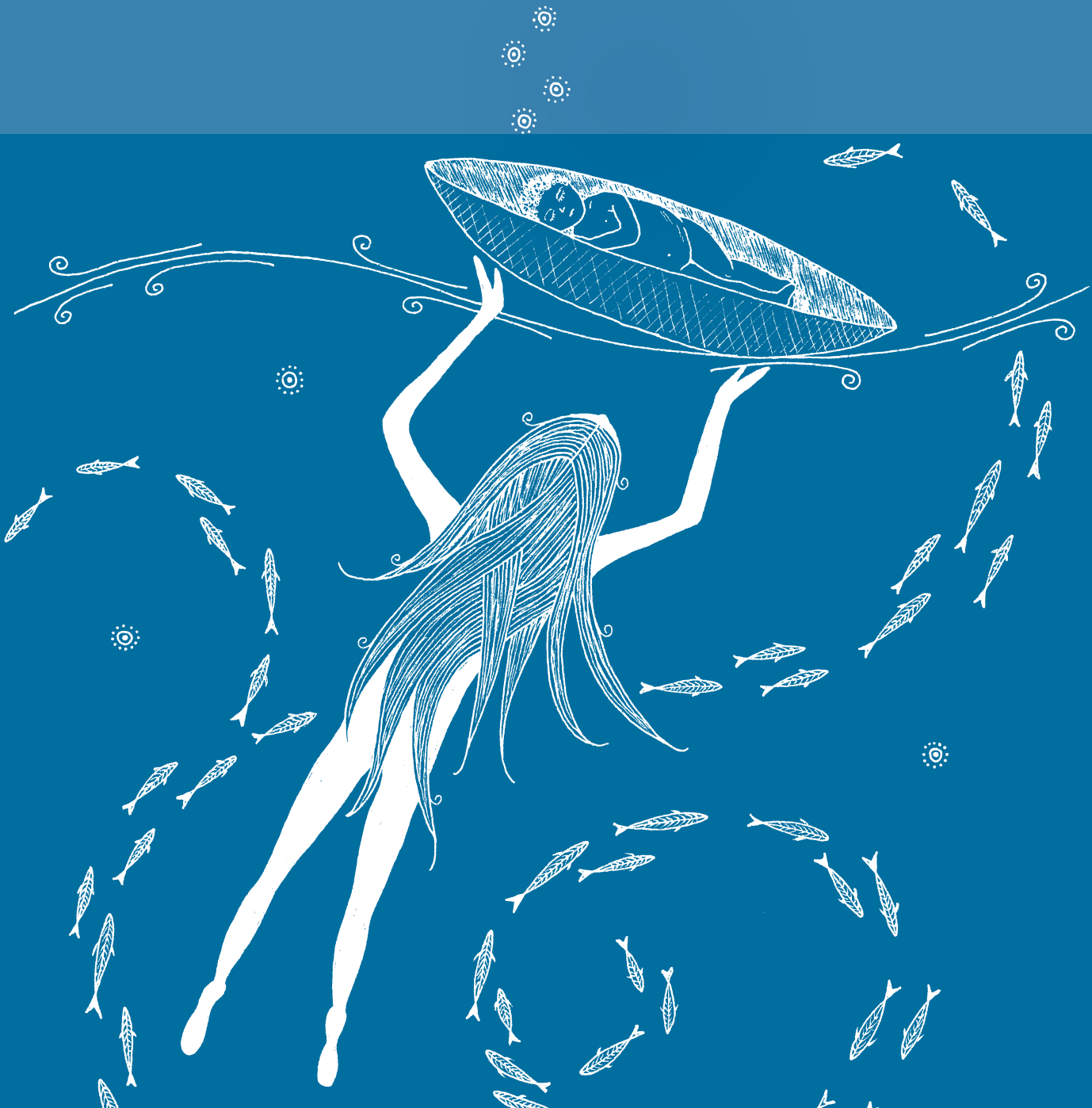
Shawana Andrews is a descendant of the the Trawlwoolway clan, Tasmania. She has a Bachelor of Arts, a Bachelor of Social Work and a Master of Public Health and since 2001 has worked in Aboriginal health in clinical practice, research, project management and development, teaching and community development. In 2012, Shawana was appointed as Lecturer in Aboriginal Health at the Melbourne School of Health Sciences at The University of Melbourne and maintains her clinical knowledge through roles at both the Royal Children's Hospital and St Vincent's Hospital, Melbourne.

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The Lowitja Institute

PO Box 650, Carlton South

Vic. 3053 AUSTRALIA

T: +61 3 8341 5555

F: +61 3 8341 5599

E: admin@lowitja.org.au

W: www.lowitja.org.au

Authors: Lance Emerson, Stacey Fox and Charlene Smith

Managing editor: Cristina Lochert

Editor: Cathy Edmonds

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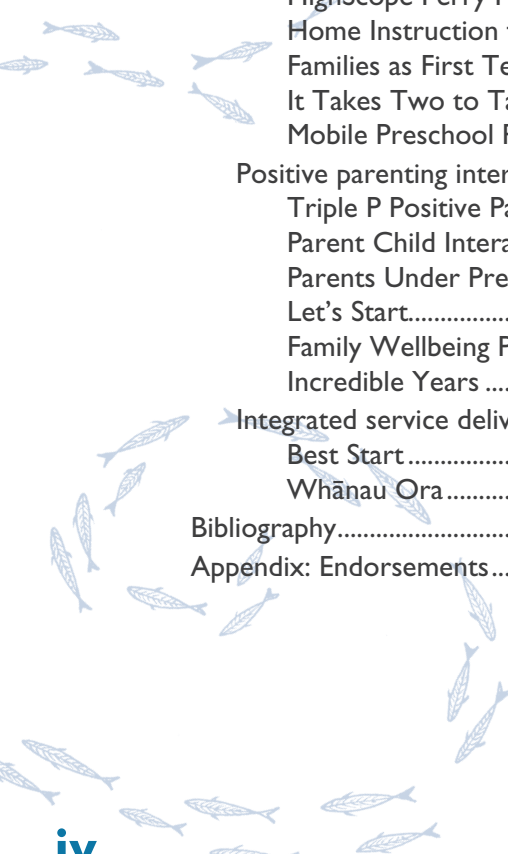
Contents

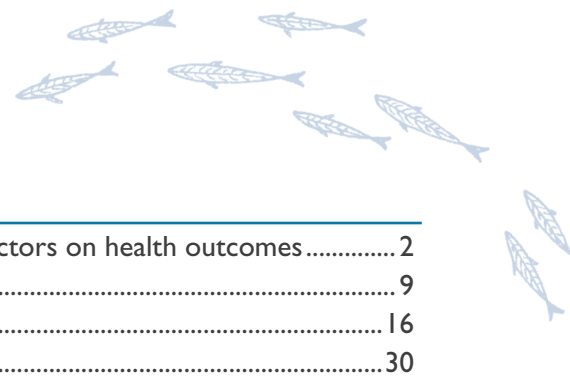
Acknowledgments	vi
Abbreviations and acronyms	vi
Preface	vii
About this report	vii
About the authors	vii
Stewardship Dialogues for Aboriginal and Torres Strait Islander Health	vii
References	ix
An opportunity to make a difference	x
Paper 1 – The importance of a healthy start to life: Synopsis of evidence	1
Introduction	1
1. The brain: Biological embedding and healthy brain development.....	1
2. The body: Links between early child development and later physical health	2
3. Adverse childhood experiences and epigenetics	3
4. The impact of parenting on healthy child development.....	4
5. The impact of poverty on healthy child development.....	4
6. The concept of risk and protective factors to positive child development	6
7. The cost benefits of a healthy start to life	9
Bibliography.....	12
Paper 2 – Effective interventions to promote a healthy start in life: Evidence-based programs for Aboriginal and Torres Strait Islander children and their families (Summary)	15
Introduction	15
A note about evidence	16
Interventions for Aboriginal and Torres Strait Islander families	16
1. Maternal and child health interventions.....	17
1a. Antenatal care.....	17
1b. Sustained home visiting (perinatal and into early years).....	17
2. Early learning interventions	17
2a. Promoting a positive home learning environment	18
2b. Preschool participation.....	18
2c. Transition to school	18
3. Positive parenting interventions	19
4. Integrated service delivery.....	20
A note about evidence of interventions for Aboriginal children and families	20
Recommendations	21
Conclusion	22
Bibliography.....	23

**Paper 3 – Effective interventions to promote a healthy start in life:
Evidence-based programs for Aboriginal and Torres Strait Islander
children and their families (Report)**

25

Introduction	25
The evidence reviews	26
Understanding evidence	26
What does ‘evidence-based’ mean?.....	26
Levels of evidence.....	26
Measuring outcomes.....	27
Evidence hierarchy	27
Systematic review	27
Randomised controlled trials with replication and follow up	27
Randomised controlled trials.....	28
Quasi-experimental studies.....	28
Pre-post studies	28
Observational studies	29
Using the best evidence	29
Rating evidence	30
Cost effectiveness of early childhood programs	31
A note on context-specific evidence	31
Evidence review	32
Maternal and child health interventions	32
Australian Nurse-Family Partnership Program (ANFPP).....	32
Maternal Early Childhood Sustained Home-visiting (MECSH).....	34
Strong Women, Strong Babies, Strong Culture	36
Mums & Babies program.....	38
Early learning interventions.....	40
Parents as Teachers (PAT).....	40
The Abecedarian Project	42
HighScope Perry Preschool Program	44
Home Instruction for Parents of Preschool Youngsters (HIPPY).....	46
Families as First Teachers (FaFT).....	48
It Takes Two to Talk: The Hanen Program for Parents	50
Mobile Preschool Program.....	52
Positive parenting interventions.....	54
Triple P Positive Parenting Program	54
Parent Child Interaction Therapy	56
Parents Under Pressure (PuP).....	58
Let’s Start.....	60
Family Wellbeing Program.....	62
Incredible Years	64
Integrated service delivery	66
Best Start	66
Whānau Ora.....	68
Bibliography.....	70
Appendix: Endorsements.....	72





Tables

1.1: Summary of evidence about the impact of early physical health factors on health outcomes.....	2
1.2: Summary of risk and protective factors for children	9
2.1: Interventions included in this paper	16
3.1: Rapid Evidence Assessment rating scheme.....	30

Figures

1.1: How adverse childhood experiences impair a child’s brain development	3
1.2: Child vocabulary development by parental income.....	5
1.3: Bronfenbrenner’s ecological model of child development.....	7
1.4: Pathways to resilience	8
1.5: Pathways to vulnerability.....	8
1.6: The Heckman Curve.....	10
1.7: Average public social spending in Australia per child as a proportion of median working-age household income.....	11
2.1: The Prevention Continuum.....	15
3.1: Pyramid of evidence hierarchy.....	28
3.2: Using available evidence	29

Acknowledgments

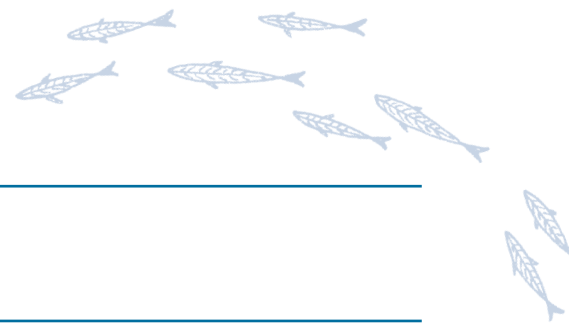
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Ms Donna AhChee	Professor Carmen Lawrence
Professor Kerry Arabena (one session)	Dr Tamara McKean (one session)
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Mr Alan Bansemer	Mr Mick Reid
Mr David De Carvalho	Ms Joy Savage
Mr Mick Gooda (Chair)	Mr Ernie Stringer
Dr Mukesh Haikerwal	Professor Peter Sutton
Mr Jeff Harmer	Dr Mark Wenitong
Professor Judith Healy	Professor Judith Whitworth
Dr Genevieve Howse	Professor Ted Wilkes
Professor Richard Larkins	

The Stewardship Dialogues project team members were Professor Ian Anderson, Professor Judith Dwyer, Ms Kate Silburn and Ms Rhondda Davis. Dr Norman Swan facilitated the Dialogues.

Abbreviations and acronyms

ACE	Adverse Childhood Experiences	MECSH	Maternal Early Childhood Sustained Home-Visiting
AIFS	Australian Institute of Family Studies	NFP	Nurse-Family Partnership
AIHW	Australian Institute of Health and Welfare	NREPP	National Registry of Evidence-based Programs and Practices
ANFPP	Australian Nurse-Family Partnership Program	PAT	Parents as Teachers
ARACY	Australian Research Alliance for Children and Youth	PCIT	Parent Child Interaction Therapy
CI	confidence interval	PRC	Parenting Research Centre
FaFT	Families as First Teachers	PuP	Parents Under Pressure
HIPPY	Home Instruction for Parents of Preschool Youngsters	RCT	randomised controlled trial
HomVEE	Home Visiting Evidence of Effectiveness	SD	standard deviation



Preface

About this report

This publication is a compendium of three papers commissioned as part of the Stewardship Dialogues for Aboriginal and Torres Strait Islander Health, a project of the Lowitja Institute.

The first two were written to inform the discussion during the Stewardship Dialogues and the third was written after the Dialogues to address an identified need for decision makers to have access to a more systematic review of the evidence about the effectiveness of different interventions.

Paper 1 – The importance of a healthy start to life: Synopsis of evidence

A summary of the evidence about why the early childhood years are important; written by Dr Lance Emmerson and Dr Stacey Fox, ARACY.

Paper 2 – Effective interventions to promote a healthy start in life: Evidence-based programs for Aboriginal and Torres Strait Islander children and their families (Summary)

A summary of what is known about the effectiveness of Australian and international programs that focuses on programs delivered in the context of child and maternal health, early learning and positive parenting, and highlights existing evidence about their implementation in Aboriginal and Torres Strait Islander communities.¹ To support the selection of programs for implementation, this paper includes a short review in which each program is rated for the level of evidence and the effect size. This paper makes recommendations about the types of interventions that could be considered for promoting a healthy start to life for Aboriginal and Torres Strait Islander children, and identifies conditions that appear to be essential components of effective implementation. It was written by Dr Lance Emmerson and Dr Stacey Fox, ARACY.

Paper 3: Effective interventions to promote a healthy start in life: Evidence-based programs for Aboriginal and Torres Strait Islander children and their families (Report)

An evidence review of the interventions introduced in the second paper. The review evaluates their effectiveness and ranks the interventions based on evidence. It also provides an overview of the meaning of evidence-based programs, including definitions of levels of evidence and an explanation of the evidence-rating scheme used in the review. This paper was prepared by Dr Charlene Smith and Dr Stacey Fox, ARACY.

About the authors

This publication was prepared for the Lowitja Institute by the Australian Research Alliance for Children and Youth (ARACY), a non-profit organisation that aims to progress and promote evidence-based programs and strategies to improve the wellbeing of children and youth by collaborating with researchers, policymakers and practitioners to turn ‘what works’ into practical, preventative action.

Stewardship Dialogues for Aboriginal and Torres Strait Islander Health

The Stewardship Dialogues for Aboriginal and Torres Strait Islander Health, a project of the Lowitja Institute, were established to test if an open exploration of underlying barriers to better progress in Aboriginal and Torres Strait Islander health policy and programs can generate new ways to approach some of the ‘wicked problems’ of policy and implementation. The project engaged

¹ In the time since these two papers were first drafted, a paper reviewing the evidence for early childhood parenting, education and health intervention programs for Indigenous children and families has been published by the Closing the Gap Clearinghouse (see Bowes & Grace 2014).

senior representatives of the main stakeholders in the Aboriginal and Torres Strait Islander health field (drawn from policy, practice, community and academic sectors) in what might be considered ‘dangerous conversations’, each one conducted over two days, with an eminent chair and expert facilitators, backed up by discussion papers produced for and/or by the group.

Dialogue participants identified that education and early years interventions, implemented in collaboration with Aboriginal and Torres Strait Islander communities and properly adapted to their settings, held the potential to produce significant long-term effects on health and wellbeing. However, as always, poor implementation without collaboration is unlikely to realise these benefits. The first two papers in this compendium were therefore written to inform the discussion during the Dialogues. The third paper was written after the Dialogues to address an identified need for decision makers to have access to a more systematic review of the evidence about the effectiveness of different interventions.

Dialogue participants agreed that the experiences of all children in their early years are critical to their future lives. Effective nurturing can influence brain development, maximise ability to learn, and enhance the ability of children to develop healthy ways of living in the world as adults. This understanding has led to the development of programs to support child development, including programs with a focus on positive parenting, early learning, and on health and wellbeing.

A focus on the early years does not mean there should be a reduced focus on the later years of childhood, as what happens in these years also makes a difference in future life chances. Engagement, retention and achievement in education are also important, as is support during times of life transitions.

For many children in Australia, including those who live in communities severely disrupted by colonisation and its consequences, and those who experience disadvantage associated with (often intersecting) factors like poverty, multigenerational unemployment, and poor access to educational and other opportunities, such programs are likely to offer significant benefits. For some Aboriginal

and Torres Strait Islander children, a focus on the early years is important not only in addressing early childhood inequities in health and wellbeing, but also in reducing their life-long consequences.

Emerging evidence suggests that there may be a positive correlation between wellbeing outcomes (such as a strong sense of self-identify, resilience and a good sense of community) and growing up in a community in which there is a strong attachment to traditional culture—although whether this is a causal relationship is not clear (Colquhoun & Dockery 2012). Nonetheless, the potential for policy and program interventions to have a negative impact on existing strengths, or simply fail to take them into account and therefore miss opportunities, is a serious risk.

For these reasons, and others, there are significant challenges in achieving widespread implementation of programs proven to be effective and in adapting them to cultural and community contexts. This means that for complex issues the concept of ‘rolling out’ good ideas as if they were copper cables is not particularly helpful. Successful programs are built on hypotheses about what is required to produce improvements for children and their parents and therefore have an underpinning logic. Adherence to this logic is important in program implementation (and required for program fidelity), but adaptation is also required so that programs are able to be implemented in the wide range of contexts in which children live.

Adaptation is particularly important to ensure that programs build on the strengths of each community and are implemented in ways that respect and support community priorities and cultural factors. Additional questions to ask prior to implementation might include:

- » What strengths can be built on (rather than only focusing on the issues to be addressed)?
- » What kind of permission (a kind of complex consent) do program providers need to work with communities and how is this permission developed?
- » Should community support and leadership be a prerequisite prior to implementation?



Resolving these issues might be expressed as part of working ‘two-ways’ or of co-designing programs. For some, this means non-Indigenous people providing support without ‘taking over responsibility’ or ‘telling Aboriginal people what to do’ (for example, see Yalu 2012). For others, it might include developing ways of working together to ensure programs resonate with the beliefs, values and frames of reference of specific communities and that indicators of success are adapted accordingly.

Within Aboriginal and Torres Strait Islander communities we know that implementation of programs developed outside communities appears to be supported by:

- » employing community members to participate in and guide program delivery
- » ensuring the requirements of the work do not create conflict for staff with their communities
- » selecting non-Indigenous staff with care (with knowledge and skills for working across cultures)
- » providing appropriate training and support
- » locating the program in spaces where communities feel safe and have a sense of ownership and control
- » ensuring the core elements of the program are maintained and adaptations carefully documented (Bowes & Grace 2014).

There is less knowledge about the effectiveness of particular programs in Aboriginal communities or evaluation of the effect of adaptation of such programs to specific community contexts. Further work is required to identify the types of community priorities and cultural factors that are important in shaping programs and in describing the ways in which communities would like success to be measured.

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Colquhoun, S. & Dockery, A. M. 2012, *The Link between Indigenous Culture and Wellbeing: Qualitative Evidence for Australian Aboriginal Peoples*, Centre for Labour Market Research and School of Economics and Finance, Curtin University, Perth.

Yalu 2012, *Early Childhood Issues: Yolŋu perspectives*. Accessed 16 February 2015 <<http://yalu.cdu.edu.au/healthResources/earlychildhood.html>>.

An opportunity to make a difference

Early years interventions can make a big difference in the lives of children and their future health and wellbeing outcomes, so it is critical that those programs most likely to produce the largest benefit are adopted in any widespread implementation effort (for example, across a state/territory or nation).

Funding should be directed towards services and approaches with demonstrated benefits. Ongoing evaluation is important so that new and innovative approaches can be shown to work and so that interventions that are not achieving their objectives can be discontinued.

There is now an opportunity to make a real difference for Aboriginal and Torres Strait children, families and communities. It requires:

- » a committed and careful process of implementation of early childhood programs nationally, based on interventions that are well supported by evidence of benefit
- » a respectful process of engagement tailored to each Aboriginal community
- » sufficient flexibility to incorporate local priorities and build on local strengths while retaining the basic logic of the program
- » good data collection and sound evaluation to inform the progressive implementation of the program and to generate good knowledge of its value.



On behalf of the participants in the Stewardship Dialogues, the Project Team recommends:

That governments commit to the national implementation of proven Early Years programs for Aboriginal and Torres Strait Islander communities that decide to take up the opportunity; and that governments commit in ways that are responsive to the strengths, priorities and concerns of communities and enable local leadership; and that engage with communities to maintain the integrity of programs with good evidence of effectiveness.





Paper 1

The importance of a healthy start to life: Synopsis of evidence

Dr Lance Emerson and Dr Stacey Fox, ARACY
September 2013



Paper 1 – The importance of a healthy start to life: Synopsis of evidence

Introduction	1
1. The brain: Biological embedding and healthy brain development	1
2. The body: Links between early child development and later physical health	2
3. Adverse childhood experiences and epigenetics	3
4. The impact of parenting on healthy child development	4
5. The impact of poverty on healthy child development	4
6. The concept of risk and protective factors to positive child development	6
7. The cost benefits of a healthy start to life	9
Bibliography	12



Paper 1 – The importance of a healthy start to life: Synopsis of evidence

Dr Lance Emerson and Dr Stacey Fox, ARACY
September 2013

Introduction

A wealth of evidence over the past 50 years links development in the early childhood years (zero to five) to future health and wellbeing outcomes. As the World Health Organization (2009, p.1) states, ‘the many challenges faced by adults, such as mental health issues, obesity, heart disease, criminality, and poor literacy and numeracy, can be traced back to early childhood’.

Evidence shows that early childhood provides a crucial opportunity for public policy interventions to shape long-term health trajectories. Once this opportunity to intervene has passed it is increasingly difficult (and typically more costly) to alter course.

This synopsis summarises seven themes that are important to the concept of a healthy start to life:

1. The brain: Biological embedding and healthy brain development
2. The body: Links between early child development and later physical health
3. Adverse childhood experiences and epigenetics
4. The impact of parenting on healthy child development
5. The impact of poverty on healthy child development
6. The concept of risk and protective factors to positive child development
7. The cost benefits of a healthy start to life.

For Aboriginal and Torres Strait Islander children, the importance of connection to culture is also crucial to their wellbeing.

1. The brain: Biological embedding and healthy brain development

In a child’s first three years of life the brain grows from approximately 25 per cent to 80–90 per cent of the adult size. Important connections between the brain’s nerve cells are developed and there is rapid growth in cognitive, language, and social and emotional development (RACP 2006). Brain development during these early years is strongly subject to environmental experiences and influences. These early years provide a significant opportunity for development, but negative experiences during this critical period can impact outcomes throughout life (Center on the Developing Child 2010).

This process of biological embedding (Silburn et al. 2011) is at its most influential from gestation into the early years of life when the brain is undergoing critical phases of growth and development. Brain development commences in the prenatal stage with a period of neural proliferation. Long-lasting impacts to the structure and formation of the brain can be influenced at this stage by maternal health.

During infancy the brain undergoes a process of ‘wiring’, where neural pathways (synapses) are formed. These pathways are shaped by the child’s experiences and environments. Research shows these pathways typically form in a hierarchical manner: from sensory pathways to language development and higher cognitive function, and thus represent ‘windows of opportunity’ for development.

During early childhood (and, less so, into the rest of life) these brain connections undergo a process of ‘hard-wiring’ and ‘pruning’. This is where connections in the brain are embedded through repeated use—a ‘use it or lose it’ process that is shaped by experience and means that certain connections become embedded while others dissipate (Silburn et al. 2011; McCain, Mustard & Shanker 2007; Center on the Developing Child 2007).

2. The body: links between early child development and later physical health

Evidence shows the importance of the early years for brain development, and there is also vast evidence on the importance of early physical

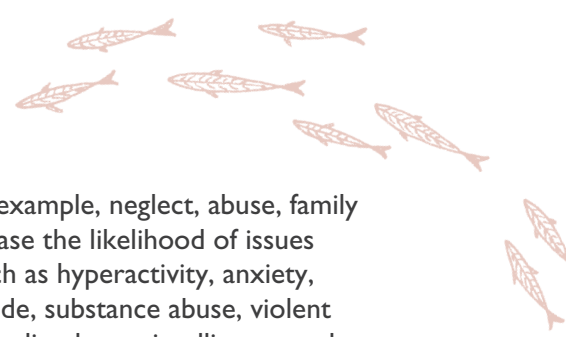
development and growth on a range of health outcomes over the longer term. Table I.1 summarises evidence about the impact of physical health factors on later life health outcomes.

Table I.1: Summary of evidence about the impact of early physical health factors on health outcomes

Health area	Influence on future health outcomes
Birth weight	Low birth weight is shown to relate to various adverse health and developmental outcomes, including cognitive and behavioural disorders, mental health problems, obesity, heart disease, diabetes, lower educational achievement, and lower employment and earning potential (Marmot 2010; COAG 2009).
Maternal nutrition	Maternal malnutrition and nutrient deficiency impacts foetal development and can lead to low birth weight and growth stunting (and associated impacts), a greater chance of mortality, disability, coronary heart disease, diabetes, cognitive and intellectual impairment, and reduced immunity (UNICEF 2012, n.d.).
Breastfeeding	Evidence of the positive health benefits of breastfeeding encompasses better development (early nutrition, immunity and attachment), cognition, educational attainment and mental health. Specific long-term health benefits of breastfeeding are likely to include protection against overweight or obesity, diabetes and high blood pressure, though some of this evidence is limited (Horta & Victora 2013).
Early childhood nutrition	Studies report that insufficient uptake of nutrients such as iron, folate and vitamin C is linked to stunted growth and anaemia. More broadly, malnutrition can lead to longer-term issues with cognitive and educational performance, reduced immunity and work capacity.
Immunisation	A large body of epidemiological evidence testifies to the value of immunisation in early childhood and the reduction or elimination of later health problems (Andre et al. 2008; AMA 2012).
Weight	The issue of overweight and obesity in childhood is linked to many short- and long-term health conditions. Evidence shows that children who are overweight or obese as early as two years of age are more likely to be obese as adults. Resultant health conditions more likely to emerge include heart disease, type II diabetes, stroke, cancer and osteoarthritis (Centers for Disease Control and Prevention 2014).
Physical activity	Lack of physical activity in early childhood is reported as a risk factor for problems such as high blood pressure, weight gain, excess body fat, bad cholesterol, respiratory difficulties, cardiovascular diseases and bone health problems (Centre of Excellence for Early Childhood Development 2011).
Motor development	Early childhood is a prime period for gross motor skills development, which subsequently affect lifelong engagement in physical activity and associated social, emotional and cognitive benefits. Studies show that motor skills have a predictive effect on pro-social behaviour and peer relationships, anxiety, aggression, hyperactivity, transition to school and academic success (Tansey 2009; Gulay, Seven & Damar 2010).

As detailed in Table I.1, antenatal health is particularly important. Risk factors to in-utero brain development during maternity include smoking, alcohol and drug use, malnutrition, antenatal depression and stress. These risks are

linked to a range of later health and development outcomes, including behaviour and conduct disorders (including criminality), hyperactivity, emotional and cognitive functioning, intellectual impairment, anxiety and depression (Allen 2011).



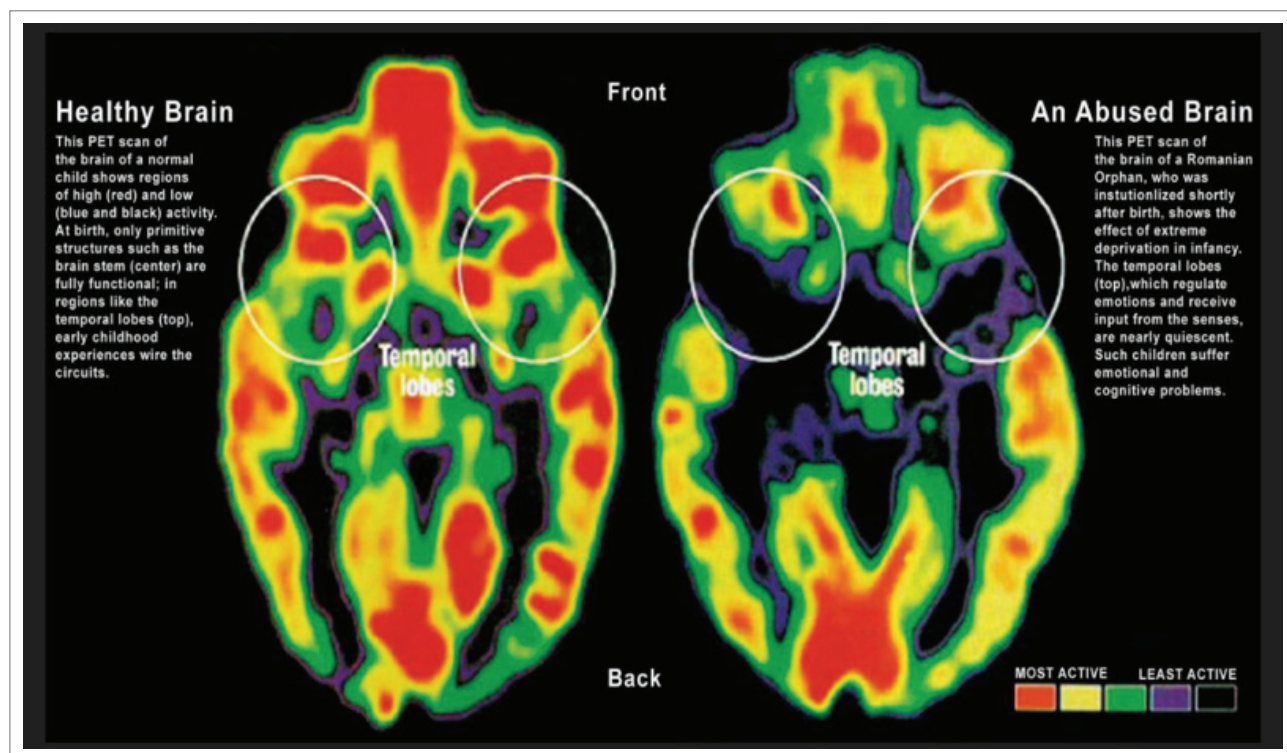
3. Adverse childhood experiences and epigenetics

The importance of early brain development and the lasting impact of positive early physical health have been empirically validated through the Adverse Childhood Experiences (ACE) Study (Felitti et al. 1998). The ACE Study commenced as a joint research project of Kaiser Permanente and the United States Centers for Disease Control and Prevention, and is one of the largest investigations ever conducted to assess associations between childhood and later-life health and wellbeing. The study involved 17,000 people and examined the association between childhood experience and health. It demonstrates how stress and trauma

early in life (for example, neglect, abuse, family death) can increase the likelihood of issues in adulthood such as hyperactivity, anxiety, depression, suicide, substance abuse, violent behaviour, criminality, lower intelligence and economic performance, cardiovascular health problems, diabetes, obesity and biomedical disease. Longitudinal studies in Australia and other countries add to this evidence by examining the association between the developmental environment to which a child has been exposed and a range of health outcomes.²

An oft-cited example of the impairment to the physical development and function of a child's brain is shown in Figure 1.1.

Figure 1.1: How adverse childhood experiences impair a child's brain development (Chugani 1997; Chugani et al. 2001)



Central to the ACE Study is the science of epigenetics—the study of changes in gene expression caused by mechanisms *other than* changes in the underlying DNA, with some of these changes being heritable. As one journal put it, ‘Your ancestors’ lousy childhoods or excellent adventures might change your personality, bequeathing anxiety

or resilience by altering the epigenetic expressions of genes in the brain’ (Hurley 2013).

Epigenetics is central to understanding the possible impact on future generations of current behaviours and environments in which parents live. For example, the environment of the early embryo can alter development by modifying the DNA. The ACE

2 For instance, the Dunedin Multidisciplinary Health & Development Study in New Zealand (Dunedin Multidisciplinary Health & Development Research Unit n.d.).

Study shows that child abuse and neglect can (in addition to harming the immediate wellbeing of the child) impair early brain development and metabolic and immune system function, leading to chronic health problems (Filetti et al. 1998; Anda et al. 2006).

These lasting impacts are enacted through leaving *epigenetic marks* on a child's genes. These are not mutations in the DNA itself; rather, these marks define how certain genes are expressed or silenced. Very strong twin studies and a recent paper show that abused children often have different patterns of DNA gene expression compared to those who were not abused as children (Mehta et al. 2013). Similarly, research conducted with women in Western Australia suggests that smoking and other stressors can adversely affect offspring for several generations (AIHW 2013).

It is currently unclear whether the epigenetic marks left by child abuse can be removed or the damage reversed. What is important, however, is that epigenetics helps us understand the importance of maternal health, not only for the parents and current baby but for generations to come.

4. The impact of parenting on healthy child development

The ACE Study and many other studies show that poor child–parent/caregiver attachment and interaction (such as unresponsiveness, poor emotional attunement and, more generally, symptoms associated with postnatal depression) affect the child's developing brain architecture. Child development and parenting research demonstrates that poor parental attachment and responsivity is linked with a range of adverse cognitive, emotional and physical health outcomes, including impaired language acquisition, behavioural and conduct disorders, antisocial and risk-taking behaviour, substance abuse, criminality, emotional detachment, mental health issues, cardiovascular health problems, obesity and type II diabetes (Allen & Duncan-Smith 2008; Boivin & Hertzman 2012).

Quality interactions and attachments with parents (or caregivers) are therefore crucial in shaping children's perceptual, cognitive and linguistic abilities, physical, social and emotional development, physical and mental health, activity, skills and behaviour in adult life (MCEECDYA 2010). Parental influences are thought to be one of the biggest impacts on children's literacy and vocabulary levels when they reach five years of age, an important finding given this is one of the most reliable predictors of social mobility later in life.

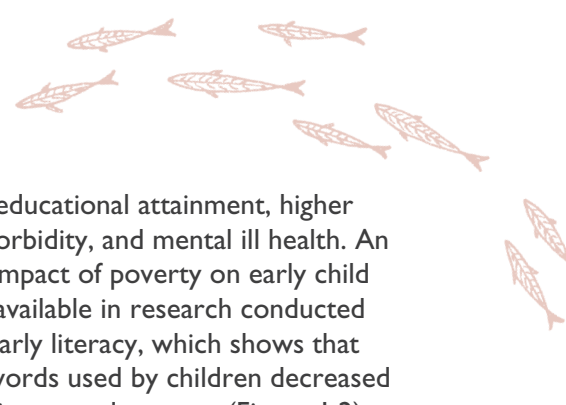
A strong source of evidence on the impact of parenting comes from 40 years of school effectiveness research, which examines the comparative impact of sources of differences in academic achievement (for example, early literacy) in students of the same age (Emerson et al. 2012). The best evidence seems to show that genes account for a large proportion of variation in educational outcomes, with other factors such as teaching, curriculum, school environment and parent engagement in learning having a cumulative, interrelated impact (Hattie 2008). Some studies show that teacher and classroom-level differences only account for around 8 per cent in the variation in children's academic outcomes, with genetic and family factors having a substantially greater impact (Byrne et al. 2010).

Positive parenting can also play an important role in mediating the effects of disadvantage. Recent research, based on analysis of longitudinal survey data from the Millennium Cohort Study in the United Kingdom, demonstrates that both poverty and parenting quality are important in affecting child development outcomes, but that poor parenting has nearly twice the impact of persistent poverty, and positive parenting and a strong home learning environment can mediate its impacts (Kiernan & Mensah 2011). Research shows that what parents do is ultimately more important than who parents are (Silva et al. 2004; Paterson 2011).

The idea that children's development is entirely dependent on the actions of their parents has appeal (particularly in today's economic climate); however, this underplays the impact of poverty on child development, as detailed below.

5. The impact of poverty on healthy child development

Socioeconomic disadvantage is recognised as a major risk factor for poorer health and development outcomes. Studies that document the impact of socioeconomic status show that children from the most deprived backgrounds are more likely to encounter adverse health outcomes in adulthood; this picture improves incrementally in line with income (or other measures for wealth/deprivation) (Department of Health 2010). Boivin and Hertzman (2012) note that socioeconomic status ranks as one of the most powerful and reliable epidemiologic predictors of human morbidities, even among children. They find that impoverished children experience:

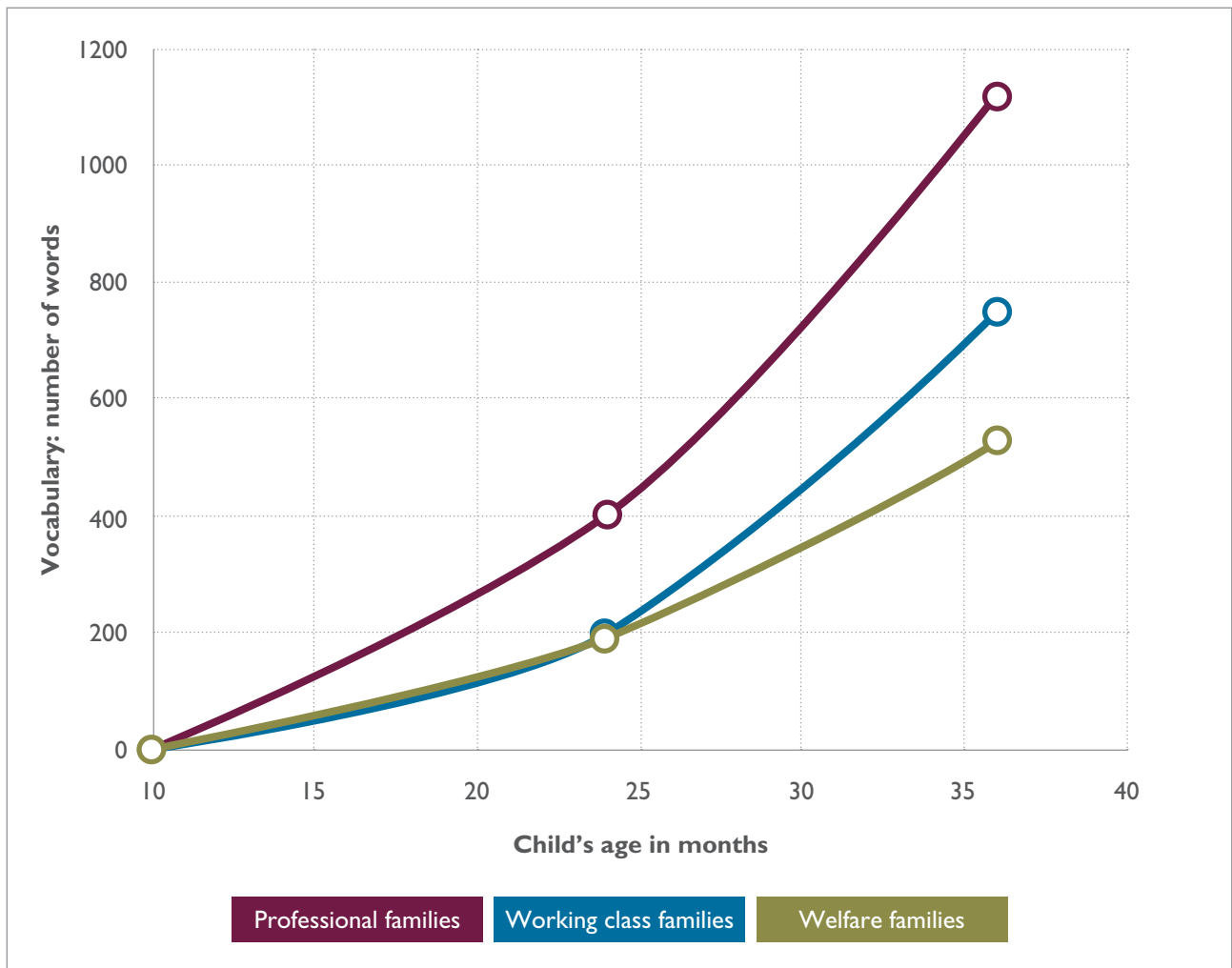


higher rates of virtually every form of human malady and developmental hurdles: low birthweight, traumatic injury, infectious disease, psychiatric disorders, developmental disability, dental health, academic achievement. (Bovin & Hertzman 2012)

The impact of poverty is widely recognised in Australia, where a range of poor outcomes are associated with lower socioeconomic status,

including lower educational attainment, higher mortality and morbidity, and mental ill health. An example of the impact of poverty on early child development is available in research conducted with regard to early literacy, which shows that the number of words used by children decreased as socioeconomic status decreases (Figure 1.2) (Hart & Risley 2003). This is associated with lower academic achievement—and some children repeat the cycle of disadvantage for their children.

Figure 1.2: Child vocabulary development by parental income (Hart & Risley 2003, p. 7)



Not everyone born into relative poverty faces an inevitable pathway towards poorer health. Similarly, not every child born into wealth will be healthy. Although it is true in general that the incidence (or percentage) of child vulnerability may be higher in lower socioeconomic status groups, there is a greater number of children who are vulnerable spread throughout the population. Rose (1992) named this the 'prevention paradox',

which describes the situation in which the majority of cases of a problem or disease come from a population at low or moderate risk of that disease, and only a minority of cases come from the high-risk population. This is highlighted well in the Australian Early Development Census, which is a saturation survey of all four- to five-year-old children starting school that measures developmental vulnerabilities. These data show

that the percentage of children with developmental vulnerability is higher in the most disadvantaged communities (31.9% of children, or 17,000 children in quintile 1 of the Socio-Economic Index for Areas, are developmentally vulnerable, while the total number across the remaining four quintiles is 36,000 children) (CCCH & TICHR 2009).

Recent academic research shows that detangling the effects of parenting from those of poverty is difficult—there is a complex relationship between poverty and parenting. The most recent evidence and academic consensus shows that:

- » the detrimental impact of poverty on cognitive development early in a child's life has a lasting legacy effect; data from the Millennium Cohort Study show that poverty at birth and at age three can have an adverse impact on cognitive ability at age seven (Dickerson & Gurleen 2012) (interestingly, poverty at age seven does not seem to have much of an impact, perhaps because of the importance of the child's early years development)
- » the impact of persistent poverty is worse for children's cognitive development than intermittent poverty (Dickerson & Gurleen 2012)
- » low income has a twofold effect on children's cognitive ability (Dickerson & Gurleen 2012). It has a direct effect on children regardless of anything their parents do, but it also has an indirect impact on parenting itself:
 - indirect impact: poverty leads to a lack of resources available to poorer parents, preventing parental investment, which in turn has a negative impact upon cognitive development; for example, trying to juggle part-time jobs or jobs with antisocial hours has a profound impact on a parent's ability to be available to read to children in the evening
 - direct impact: the best evidence points to the fact that after controlling for parenting investment, poverty still has a direct effect on child cognitive development, especially if the household is in poverty at birth and/or age three (Dickerson & Gurleen 2012).

This means that any approach that ignores or downplays the role of material resources in discussions of outcomes for children needs to be challenged. A focus on parenting and poverty is required, but in focusing on the two, we need to be mindful that there are limitations to progressing place-based approaches in vulnerable communities. For example, Hertzman (2011) has estimated that policies and programs that target children in vulnerable populations only reach about 20 per cent of that population. Furthermore, families with the highest risk of child abuse and neglect, as well as other parenting difficulties, are those least likely to take up services (Katz, La Placa & Hunter 2007). This applies particularly to culturally and linguistically diverse families, parents with mental illness and substance misuse, and fathers (Henricson 2002). Furthermore, even if such families access these services, there is a very high rate of service refusal or failure to complete the service or program offered for vulnerable families, with drop-out rates from 35–70 per cent (Watson 2005).

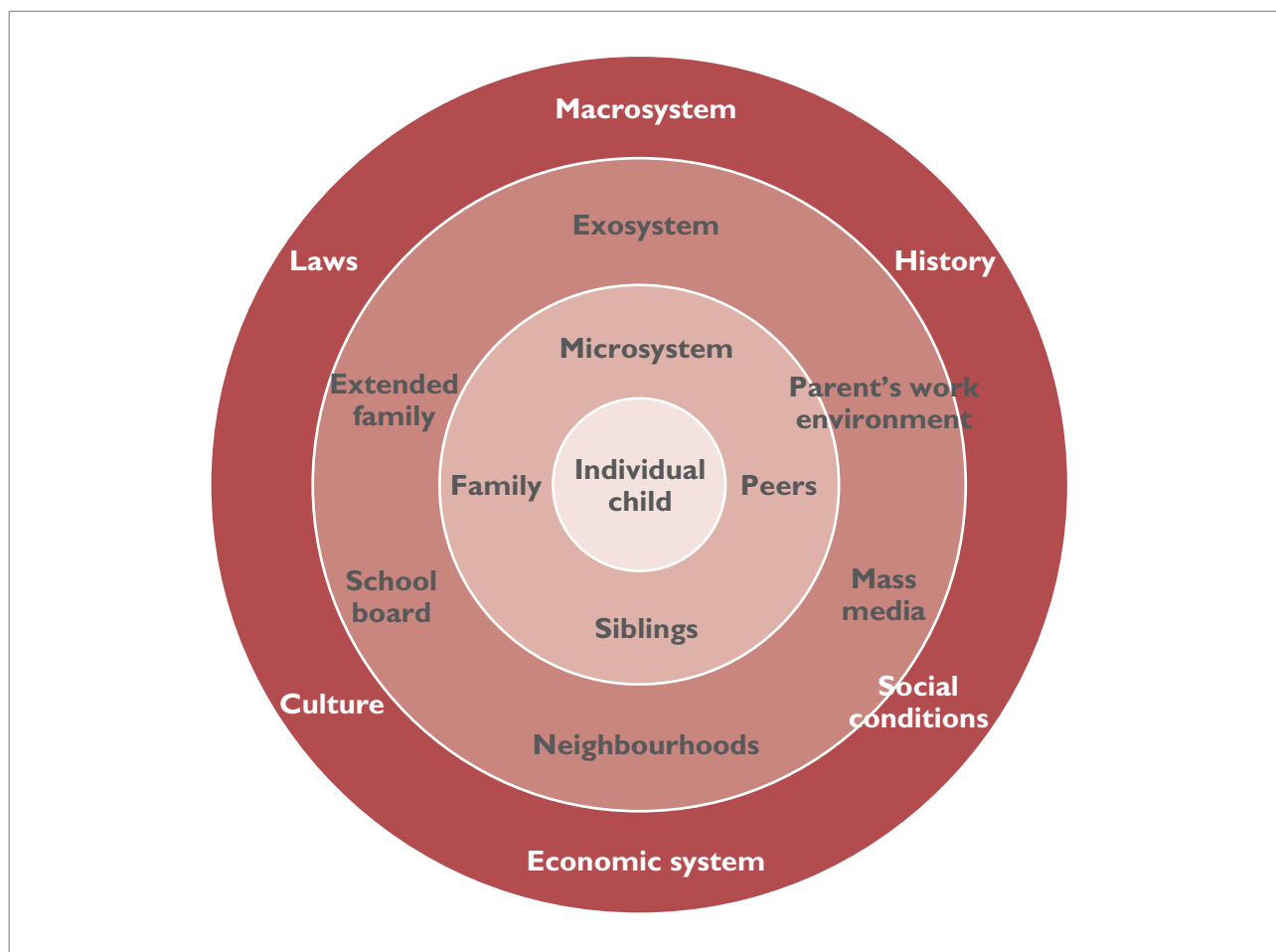
6. The concept of risk and protective factors to positive child development

As detailed above, a range of early childhood risk factors are known to impact adversely on longer-term outcomes. But a range of protective factors are also known to have positive impacts (such as secure attachment and easy temperament, at least average intelligence, family harmony, supportive relationships with other adults and community involvement) (Centre for Community Child Health 2000).

It is also recognised that no child or family lives in a vacuum. Many complex social and environmental factors may directly or indirectly influence daily decisions and shape the outcomes of the child and family. Drawing on the ecological model of child development, these factors combine to influence early childhood and can be understood to operate at the level of the child, his or her family, his or her networks, and wider community and society factors (Bronfenbrenner 1979) (Figure 1.3).



Figure 1.3: Bronfenbrenner’s ecological model of child development (Moloney et al. 2012)



The interaction of risk and protective factors, through their combined and cumulative effects, shape the developmental trajectories of children. Figures 1.4 and 1.5 demonstrate the pathways through which children’s vulnerability and resilience are developed, reinforced and consolidated over

time. The figures demonstrate the importance of early childhood in establishing the foundations for future health and wellbeing, as well as the need for early childhood interventions that are multifaceted and mutually reinforcing and that target the key determinants of children’s outcomes.

Figure I.4: Pathways to resilience (Zubrick & Robson 2003, p. 4)

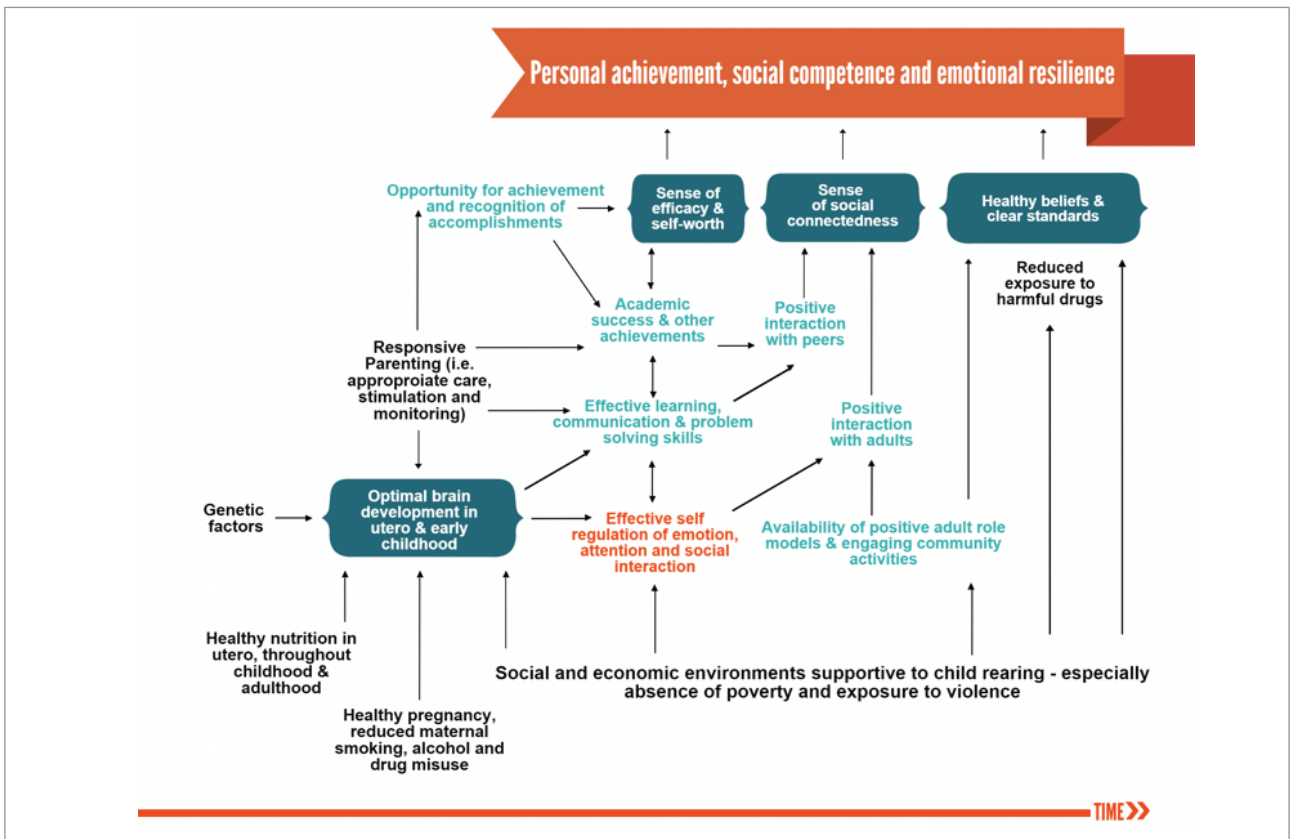
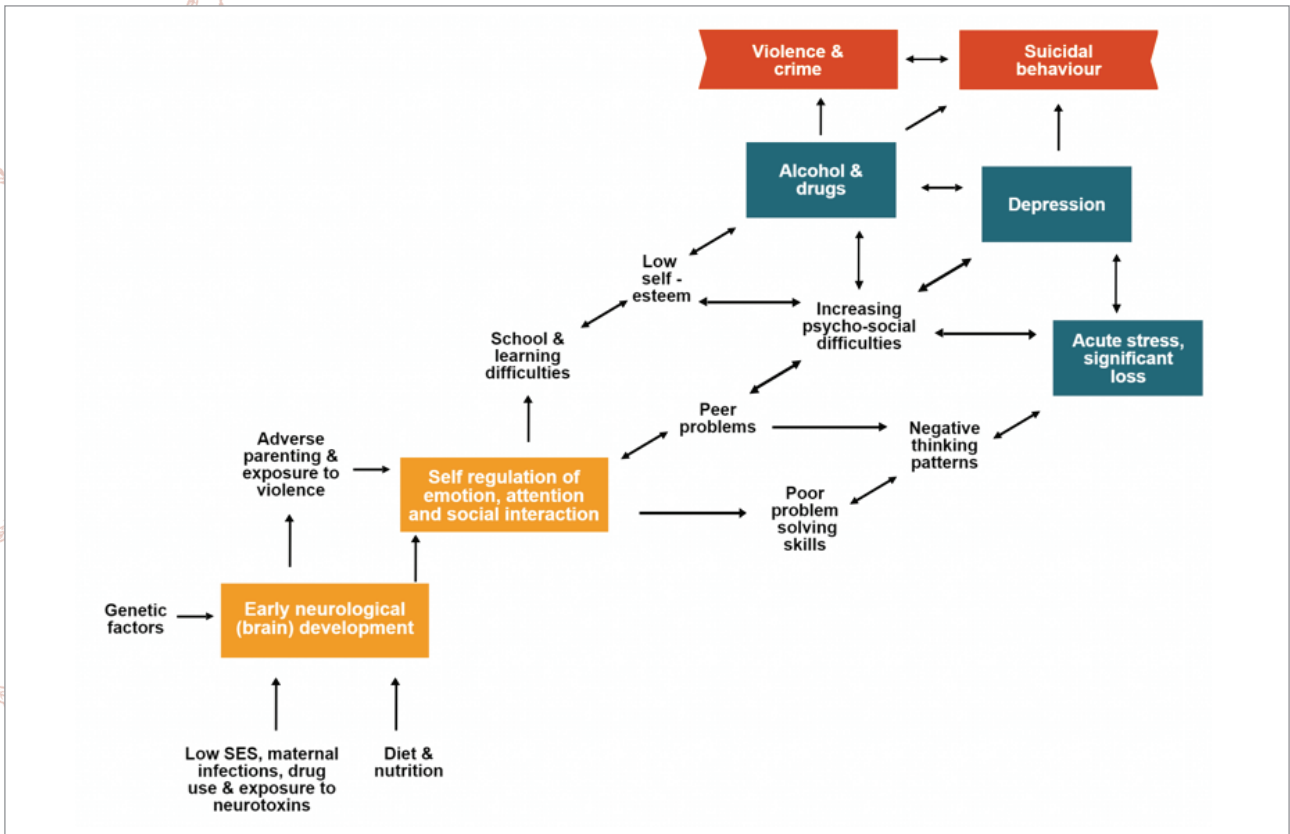
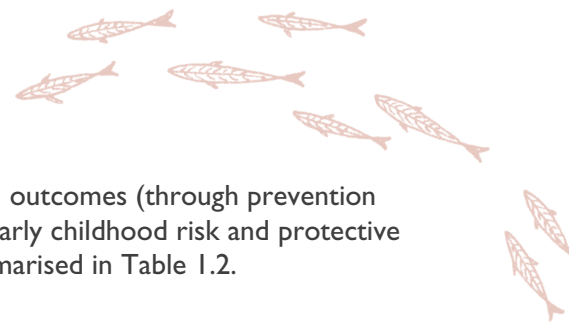


Figure I.5: Pathways to vulnerability (Zubrick & Robson 2003, p. 4)





Understanding the ecological model of child development, as well as risk and protective factors, allows us to better understand how to intervene

to improve child outcomes (through prevention or treatment). Early childhood risk and protective factors are summarised in Table 1.2.

Table 1.2: Summary of risk and protective factors for children (AEDC 2015; Goldfeld et al. in CCCH and TICHR 2011)

Level	Risk factors	Protective factors
Child	Delayed development Difficult temperament	Social skills Attachment to family Independence
Immediate family and household	Lack of warmth and affection Physical or mental illness (e.g. depression) Family instability, conflict or violence	Competent and stable care Breastfeeding Adequate family income and housing
Kinship and internal networks	Isolation Absence of peer and social supports	Positive supportive relationships with extended family and friends and neighbours Cultural and faith-based networks
Community environments, networks and formal services	Inadequate housing Socioeconomic disadvantage	Positive, supportive relationships with teachers and community professionals Participation in community activities (e.g. sport, recreation, church) Access/availability of community services (e.g. playgroups, health services, childcare and education) Freedom from discrimination (e.g. racism, sexism)
Broader economic, policy, political, social and environmental influences	Environmental conditions (e.g. drought, flooding) Unstable economic conditions (e.g. unemployment)	Child and family-friendly public policies High-quality universal programs (e.g. health care, early childhood education and care)

7. The cost benefits of a healthy start to life

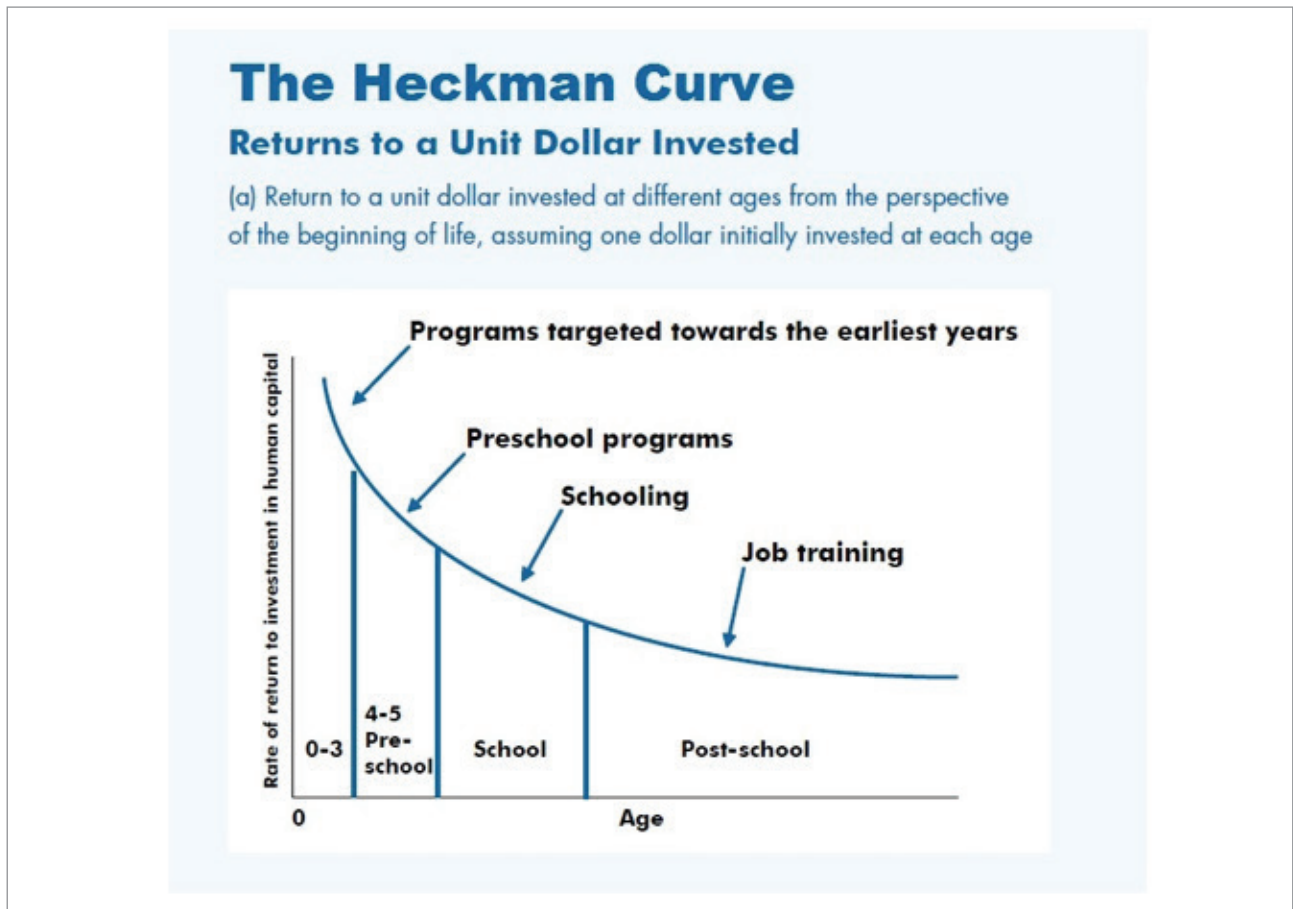
A number of studies have explored the cost benefits of a healthy start in life, typically in the context of early intervention strategies and programs. Although some of these analyses face methodological limitations (for example, projecting costs, assuming certain patterns and outcomes are a direct impact of an intervention), evidence shows that programs based on key principles of human growth and development that are delivered in the early years offer the best return on investment (Heckman 2006).

This research demonstrates that a healthy start in life improves economic outcomes by increasing earning capacity (and taxation revenue), while at

the same time reducing the need for often costly interventions in health, welfare, education and criminal justice systems later in life. For instance, a longitudinal study in a disadvantaged area of London shows that by the age of 28 the cost to society of individuals with childhood conduct disorder is ten times higher than for those without this problem due to increased use of the criminal justice, health, remedial education and welfare service systems (Robinson, Silburn & Arney 2011).

The work of Nobel Prize-winning University of Chicago Economics Professor James Heckman demonstrates that great gains are possible by investing in early and equal development of human potential (Figure 1.6).

Figure 1.6: The Heckman Curve (Heckman n.d.)

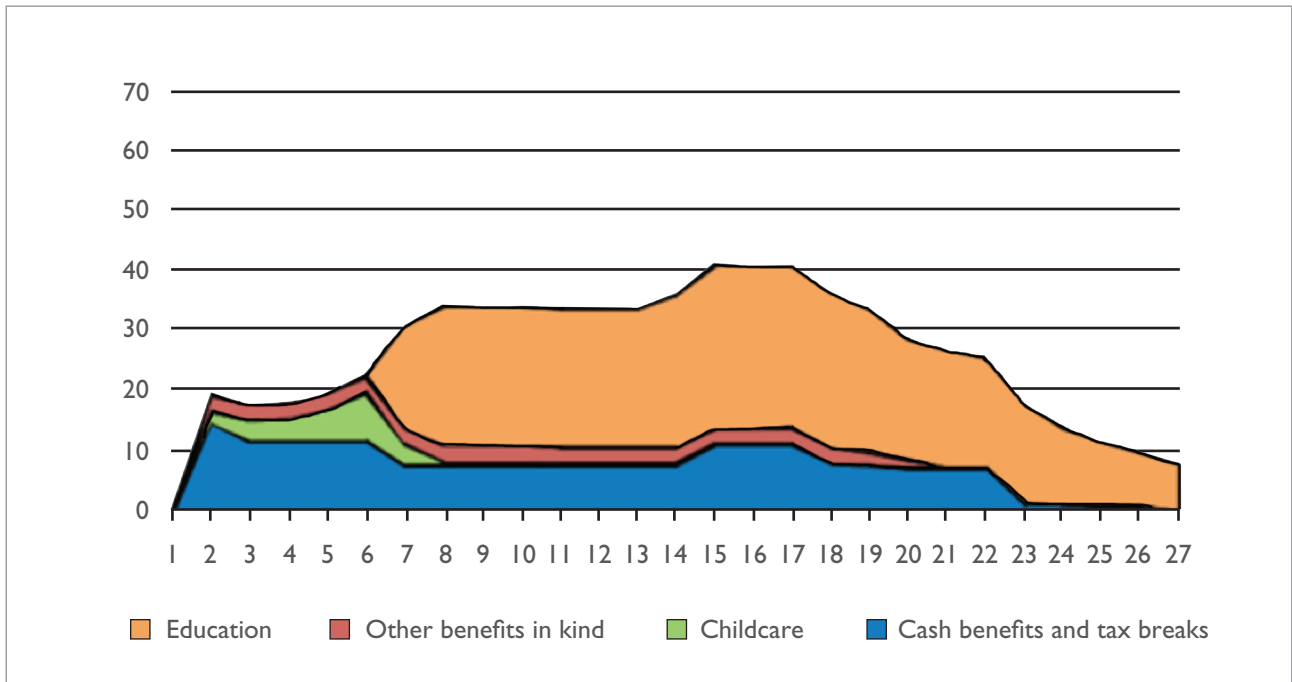


In recent research in Canada, Kershaw et al. (2010) analysed longitudinal education datasets to highlight relationships between early childhood vulnerability (as measured on the Canadian Early Development Index) and high school graduation and/or entry into the criminal justice system. Based on this analysis, the authors estimate that the cost of early childhood vulnerability to the Canadian economy is between \$2.2 and \$3.4 trillion, and that reducing the current and projected rate (from 29% to 10%) would result in an increase in gross domestic product of more than 20 per cent over 60 years.

The cost benefits of early intervention provide a strong and compelling argument for strategies to support the healthy start of children in life. However, as detailed in Figure 1.7, money invested in brain development is largely inversely proportional to the most active periods of brain development (i.e. the early years). Governments are starting to look towards early intervention to improve individual, social and population outcomes, acknowledging the importance of the first five years in life for sustained, long-term wellbeing and prosperity.



Figure I.7: Average public social spending in Australia per child as a proportion of median working-age household income (OECD 2009, p. 79)



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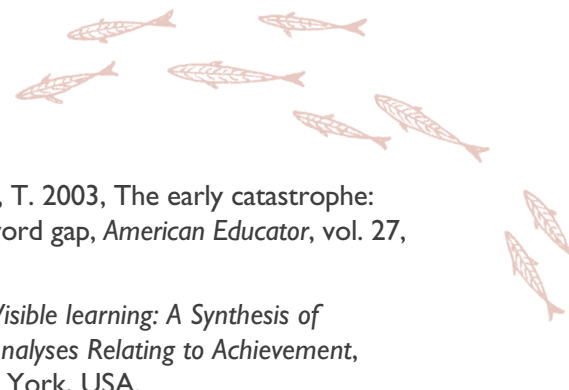
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Paper 2

Effective interventions to promote a healthy start in life: Evidence-based programs for Aboriginal and Torres Strait Islander children and their families (Summary)

Dr Stacey Fox and Dr Lance Emerson, ARACY

September 2013



Paper 2 – Effective interventions to promote a healthy start in life: Evidence-based programs for Aboriginal and Torres Strait Islander children and their families (Summary)

Introduction	15
A note about evidence	16
Interventions for Aboriginal and Torres Strait Islander families	16
1. Maternal and child health interventions	17
1a. Antenatal care	17
1b. Sustained home visiting (perinatal and into early years)	17
2. Early learning interventions	17
2a. Promoting a positive home learning environment	18
2b. Preschool participation	18
2c. Transition to school	18
3. Positive parenting interventions	19
4. Integrated service delivery	20
A note about evidence of interventions for Aboriginal children and families	20
Recommendations	21
Conclusion	22
Bibliography	23



Paper 2 – Effective interventions to promote a healthy start in life: Evidence-based programs for Aboriginal and Torres Strait Islander children and their families (Summary)

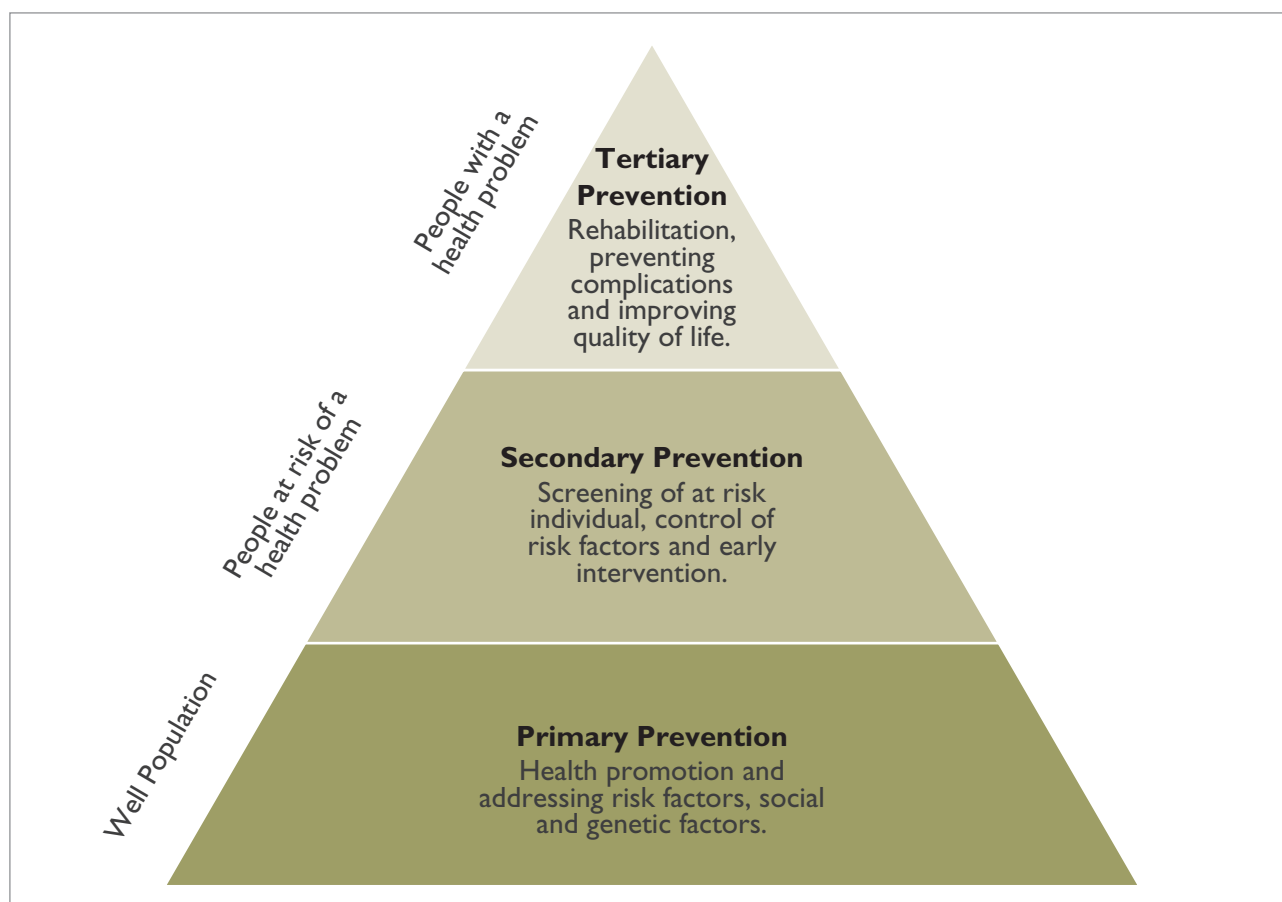
Dr Stacey Fox and Dr Lance Emerson, ARACY
September 2013

Introduction

The early childhood years play a critical role in shaping longer-term health, learning and wellbeing outcomes. The cost benefit and long-term impact of prevention and early intervention initiatives

are widely recognised (Wise et al. 2005), with interventions falling into three main categories: primary, secondary and tertiary strategies (Figure 2.1).

Figure 2.1: The Prevention Continuum (HSC Medical Center n.d., adapted from Healthlink 2005)



In an early childhood context, the most effective interventions for promoting a healthy start in life are through primary, and to a lesser extent secondary, prevention, particularly in three broad categories: maternal and child health interventions, early learning interventions and positive parenting interventions. To maximise their effectiveness, these interventions must be embedded in a coherent and coordinated service system that is responsive to the developmental pathways identified in Paper 1 in this report.

This paper provides a selection of interventions chosen due to their strength of evidence and potential applicability for Aboriginal and Torres Strait Islander children and families. ARACY's Nest-What Works for Kids website is being developed to provide easy access to evidence-based programs, practices and tools (ARACY 2015).

A note about evidence

What is surprising from the past 40 years or so of research is that very few evidence-based early child development programs are delivered, not just in research trials or a handful of locations, but to scale and across the board (Little 2012). This is the case in Australia, but also in the United Kingdom and many other developed countries (Allen 2011). The difficulty is not only in identifying effective interventions (noting that most of the evidence is programmatic evidence from the United States), but in implementing these interventions *in practice*.

The norm within Australia and internationally is to deliver unproven, untested and potentially harmful interventions. Eamonn Noonan, the Chief Executive Officer of the Campbell Collaboration,³ stated at the Global Implementation Conference in August 2013 that, 'Only about one percent of government funding on human service interventions is evidence based.'

Interventions for Aboriginal and Torres Strait Islander families

This paper highlights interventions that are designed specifically for Aboriginal and Torres Strait Islander families but have limited evidence as yet; interventions that have been adapted for Aboriginal and Torres Strait Islander families and that have some evidence of effectiveness; and interventions that are proven to be effective but have not been evaluated with Aboriginal or Torres Strait Islander families (Table 2.1).

The interventions are grouped into three broad categories of priority pathways to improve child development outcomes in the early years:

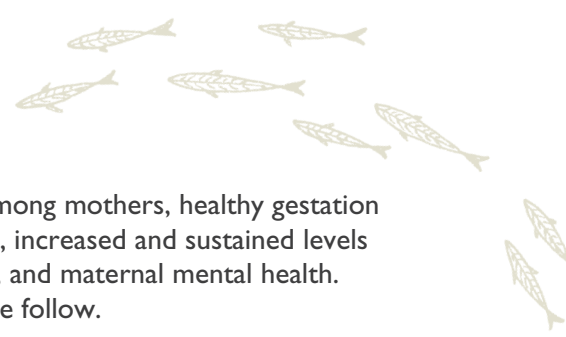
- » maternal and child health interventions
- » early learning interventions
- » positive parenting interventions.

A fourth category, integrated service delivery, provides two examples of a collaborative approach to program and practice.

Table 2.1: Interventions included in this paper

Interventions designed specifically for Aboriginal and Torres Strait Islander families but with limited evidence as yet	Interventions adapted for Aboriginal and Torres Strait Islander families with evidence of effectiveness	Interventions proven to be effective, but not yet evaluated with Aboriginal or Torres Strait Islander families
Mums & Babies program Strong Women, Strong Babies, Strong Culture Program Bulundidi Gudaga Families as First Teachers (FaFT) Mobile Preschool Program Let's Start Family Wellbeing Project Best Start	Australian Nurse-Family Partnership Program (ANFPP) Home Instruction for Parents of Preschool Youngsters (HIPPO) Triple P Positive Parenting Program	Group antenatal care right@home Parents as Teachers (PAT) It Takes Two to Talk: The Hanen Program for Parents HighScope Perry Preschool Program The Abecedarian Project Parent Child Interaction Therapy (PCIT) Parents Under Pressure (PuP) Incredible Years Whānau Ora

³ Campbell Collaboration provides online systematic reviews summarising international research evidence on the effects of interventions in crime and justice, education, international development and social welfare.



I. Maternal and child health interventions

Holistic programs that are responsive to the needs of target populations and local contexts have been shown to be effective in increasing access to antenatal health care and improving child health outcomes. Effective approaches offer universal maternal and child health services, as well as specialist support to address key determinants of child health such as maternal smoking or alcohol and drug use. Specific interventions follow.

Ia. Antenatal care

- » **Group antenatal care** for young parents is associated with increased birth weight and reduced premature birth (DHS 2007).
- » The **Mums & Babies program** at the Townsville Aboriginal and Islander Health Service introduced a cross-disciplinary team approach and more coordinated services and provided transport, resulting in a substantial increase in client numbers, a decrease in the number of women receiving an inadequate level of care, an increase in birth weight and a significant reduction in perinatal death (DHS 2007).
- » The **Strong Women, Strong Babies, Strong Culture Program** is delivered by respected community-based Aboriginal women. The intervention provides pregnant Aboriginal women with maternal education, advice on nutrition, smoking and alcohol use, antenatal care, testing and treatment for sexually transmitted diseases, and advice on medical care. An evaluation identified significant increases in mean birth weight, reduction in low birth weight and an increase in antenatal clinic attendances (DHS 2007; Mackerras 2001).

Ib. Sustained home visiting (perinatal and into early years)

There is solid evidence that well-designed sustained home visiting programs are an effective strategy for delivering a range of health, parenting and early learning services to families requiring additional support (Moore et al. 2012; McDonald, Moore & Goldfeld 2012). Sustained home visiting may be effective in influencing a wide range of parental and child wellbeing outcomes, including reduced

substance use among mothers, healthy gestation and birth weight, increased and sustained levels of breastfeeding, and maternal mental health. Programs of note follow.

- » **Australian Nurse-Family Partnership Program (ANFPP)**: the ANFPP is an adaptation of the Nurse-Family Partnership (NFP) based at the University of Colorado. It is designed to improve prenatal health and outcomes, improve child health and development, and improve families' economic self-sufficiency and/or maternal life course development. This model is highly effective for young, first-time mothers who present early in pregnancy. It has been piloted in three sites in the Northern Territory, with the formative evaluation identifying implementation challenges but early signs that the model was acceptable to families (Ernst & Young 2012). No outcomes evaluation on NFP has been undertaken in Australia as yet.
- » **right@home**: an Australian-developed program built on the Maternal Early Childhood Sustained Home-Visiting (MECSH) model. Undergoing a second large-scale randomised controlled trial in 2014-2015, right@home focuses on building effective relationships, parent-craft skill development, parental attachment and responsivity, and fostering a positive home learning environment.
- » **Bulundidi Gudaga**: an adaptation of the MECSH/right@home program for Aboriginal families and children. Undergoing a clinical trial in 2013-2015, this program is delivered through the universal maternal and child health system in collaboration with the local Aboriginal community. Aboriginal health workers are part of an interdisciplinary team that works with families over two years and targets risk factors of particular concern to the community.

2. Early learning interventions

Evidence demonstrates the importance of child attendance and participation in a quality preschool environment and the effectiveness of this on short-, medium- and long-term health and development outcomes. Similarly, a positive, engaging home learning environment is a strong predictor of good outcomes and can help ameliorate the impacts of poverty and disadvantage.

2a. Promoting a positive home learning environment

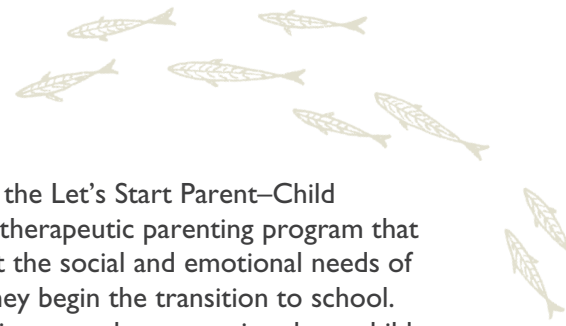
- » **Home Instruction for Parents of Preschool Youngsters (HIPPY):** a home visiting program that focuses on parent-involved early learning and helping parents prepare their children for school. Significant positive impacts were found across a number of important developmental domains and spheres of influence, including the child, the parent, the home learning environment, and parents' social connectedness and inclusion (Liddell et al. 2011). HIPPY has been implemented in a number of Aboriginal communities and qualitative evaluation suggests that it is promising.
- » **Parents as Teachers (PAT):** trained parent educators visit homes to deliver lessons and materials about child developmental stages and needs, and to conduct basic health and development checks. Evaluation findings indicate that this program leads to parents being more involved in their children's schooling and engaged in language and literacy promotion. Children are shown to have more advanced language and problem-solving skills, higher social development and increased readiness for school.
- » **It Takes Two to Talk:** The Hanen Program for Parents: a program that aims to increase the child's social communication skills and language development by enhancing the quality of interaction between the parent and child. Research has consistently demonstrated direct effects of this approach on various measures of communication and language development with young children with language delays.
- » **Families as First Teachers (FaFT):** designed by and for Aboriginal and Torres Strait Islander parents, FaFT provides early learning programs, home visits, family workshops and individual consultations to Indigenous families to strengthen their knowledge of child development. The program has received strong qualitative feedback. Quantitative data is more limited, but one survey showed a 96 per cent retention rate for children transition to preschool, and program data indicated that around 60 per cent of families attend the program regularly (Silburn n.d.).

2b. Preschool participation

- » **HighScope Perry Preschool Program:** a high-quality, high dose and intensity preschool program with an evidence-based curriculum, delivered by qualified early childhood teachers. Longitudinal study data show how high-quality preschool (with regular attendance) led to increased literacy and educational attainment, and lower antisocial behaviour and crime among the intervention group (Coalition for Evidence-Based Policy 2012).
- » **Mobile Preschool Program:** this program provided training and resources to enable local Aboriginal staff to offer, ideally, around 10–15 hours of preschool education in remote communities, with support from a visiting early childhood educator. Early findings show some improvement in child motor skills, cognitive progress and perceived readiness for school through the intervention. Implementation fidelity was identified as a key issue in measuring the program's impact on child outcomes (Nutton et al. 2011).
- » **The Abecedarian Project** provides high-quality early childhood education and preschool for vulnerable children. Each child has an individualised prescription of educational activities and educational activities consisting of games incorporated into the child's day. These activities focus on social, emotional and cognitive areas of development and give particular emphasis to language. This intervention has proven effectiveness in educational and life outcomes well into adult life.

2c. Transition to school

- » In spite of a substantial body of literature identifying the features of effective transition-to-school programs for Aboriginal and Torres Strait Islander children, few specific interventions have been developed and no efficacy evaluations could be identified (Mason-White 2013; Dockett, Perry & Kearney 2010).



3. Positive parenting interventions

Parenting is one of the strongest influences on child wellbeing. Responsive and attuned parenting can significantly ameliorate the detrimental impacts of poverty and disadvantage, especially when combined with a rich home learning environment. There are a number of existing parenting programs with relatively strong evidence of efficacy but few have been able to demonstrate effectiveness with Aboriginal and Torres Strait Islander parents, in part because of challenges with implementation fidelity and the ‘cultural fit’ of programs that may reflect Western norms of parenting and child rearing.

- » **Triple P Positive Parenting Program** aims to improve child behaviour problems, reduce dysfunctional parenting practices and increase use of appropriate discipline and positive parenting strategies, as well as increase parental confidence and adjustment. Parents receiving the intervention reported significantly lower levels of targeted child behaviour problems and dysfunctional parenting and reduced parental anxiety and stress in comparison to wait-listed parents at post-assessment (PRC 2012). A small randomised controlled trial of an Indigenous Group Triple P found some positive changes in both child behaviour and parenting style but a small sample size means results are not conclusive (Turner, Richards & Sanders 2007). It is important to note that a recent systematic review and meta-analysis has raised questions about the current evidence base for Triple P on the basis of small sample sizes and potential conflicts of interest (Wilson et al. 2012).
- » **Parent Child Interaction Therapy (PCIT):** an intervention that provides treatment for children with behavioural difficulties in the early years. The program is associated with significant improvements in behaviour intensity; maternal anxiety, depression and stress; the proportion of families with clinical levels of parenting stress; and difficulties with internalising and externalising behaviour (PRC 2012).
- » **Let’s Start:** the Let’s Start Parent–Child Program is a therapeutic parenting program that helps support the social and emotional needs of children as they begin the transition to school. Let’s Start brings together expertise about child development, early learning and parenting to support the emotional wellbeing of parents and children. It is respectful of kinship, culture and Aboriginal family values, and care is taken to adapt Let’s Start to meet local needs. The Let’s Start evaluation identified a significant reduction in problem behaviour and parental distress, resulting in improved child wellbeing and parental self-efficacy (Robinson et al. 2009). The evaluation identified challenges in attracting and retaining families in the intervention (Robertson & Zubrick 2012).
- » **Parents Under Pressure (PuP):** this program is aimed at families with highly complex needs, such as parental substance abuse or involvement with the criminal justice system. Participants in the program showed significant reductions in parenting stress, child abuse potential, methadone dose and child behaviour problems, and improvements in maternal emotional wellbeing, parent–child functioning and levels of stress experienced in the parenting role.
- » **Family Wellbeing Project:** this program is not targeted specifically at parents of young children, but through a focus on empowerment and personal development the program aims to enhance problem-solving skills and strengthen healthy behaviour and family wellbeing. Strong qualitative feedback has identified an enhanced capacity to exert control over factors shaping health and wellbeing, and the development of attitudes and skills to help parents to cope better with day-to-day life challenges (Tsey et al. 2010).
- » **Incredible Years:** a parent training program that aims to give parents and teachers strategies to build positive relationships, foster attachment, manage challenging behaviour and support emotional regulation. The core components of the program have a solid evidence-base. A pilot study of the Incredible Years in New Zealand found that the program was effective with Māori families, although the effect sizes were generally smaller than for non-Māori (Sturrock & Gray 2013).

4. Integrated service delivery

- » **Best Start:** this approach to delivering integrated early years services includes six sites directly targeting Aboriginal and Torres Strait Islander families. Best Start offers a range of family-friendly services in nutrition and health education, early language and numeracy, playgroups and integration into pre-primary school programs. The evaluation found positive impacts on health, social and learning outcomes, and the development of parenting skills; the governance model was also identified as an effective example of coordinated service delivery (Commissioner for Children and Young People WA 2012).
- » **Whānau Ora:** Whānau Ora is an inclusive inter-agency approach to providing health and social services that focuses on building the capacity of Māori families. The funding and service delivery model aims to work with Whānau (extended families) as a whole, rather than focusing separately on individual family members and their problems. Each Whānau has a practitioner or 'navigator' to work with the Whānau to identify needs, develop a plan to address those needs, and broker access to a range of health and social services. An outcomes evaluation has not yet been conducted, but an initial study shows improved family closeness (85%), regular exercise (78%), reduced smoking (54%), more confidence in parenting/caring (84%), improved housing security (71%), income (71%), and connection to culture (83%).

A note about evidence of interventions for Aboriginal children and families

There are clear and consistent messages about effective service delivery strategies when working with Aboriginal and Torres Strait Islander families and communities. For example:

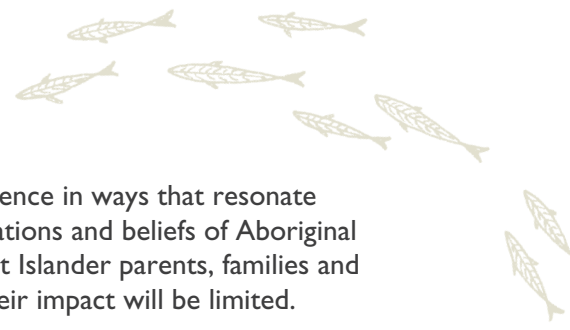
- » there must be a commitment, including adequate resourcing, to doing projects with, not for, Aboriginal and Torres Strait Islander people

- » the inclusion of Aboriginal and Torres Strait Islander people in the design and delivery of services is centrally important
- » respect for language and culture is critical
- » working together through partnerships, networks and shared leadership is the most effective way of working
- » there is a need for holistic and integrated approaches, with a focus on recognising and building strengths
- » there is a need to address experiences of trauma and help provide avenues for healing
- » there is a need for skilled practitioners with high levels of cultural competence
- » we must develop social capital and recognise underlying social determinants (AIHW 2011).

However, program evaluations consistently identify significant challenges in translating these principles into practice, and as a result many programs have tended not to achieve results of the magnitude desired.

Evaluations of Triple P and Let's Start, for instance, report reduced levels of engagement and retention, even when the program content and delivery had been adapted for Aboriginal parents. Furthermore, the effect size (or impact) on Indigenous children's outcomes was smaller than the impact on non-Indigenous children (Robinson et al. 2009; Turner, Richards & Sanders 2007). This indicates that program design and implementation are core issues in implementing interventions for Aboriginal and Torres Strait Islander children.

Evidence-based programs that are 'manualised' and implemented with a high degree of fidelity have significant potential to ensure that outcomes are consistently achieved, as well as offering proven return-on-investment. However, as detailed above a number of early childhood and parenting interventions have strong evidence of effectiveness (PRC 2012; Communities that Care 2012), but a significantly shorter list of programs show evidence that they have been effectively adapted for Aboriginal and Torres Strait Islander children and families. In part, this reflects an under-investment



in rigorous program evaluation, the challenges involved in conducting research in this area and systemic issues involved in translating evidence into practice. However, there are also underlying issues that appear to dampen the effectiveness of ‘manualised’ programs and their capacity to lead to sustained change.

In order to effectively facilitate behavioural change, program content must first resonate with the beliefs and expectations families and communities hold about child development, health and wellbeing, and the role of parents (Grieves 2009). An intervention’s ‘cultural fit’ reflects its capacity to recognise and promote strengths and encourage change (Robertson & Zubrick 2012). The reduced impact that many existing programs and interventions have for Aboriginal and Torres Strait Islander families and communities points to the need for greater attention to the way messages about early childhood development are conceptualised and communicated (Smith et al. 2003; Kruske et al. 2012).

Additionally, children require regular, consistent and ongoing exposure to developmental opportunities. One-off interventions or programs that do not respond holistically to families’ needs and circumstances are not, by themselves, likely to change children’s trajectories. To achieve sustained change, programs and interventions must be delivered with a duration and intensity that ensures children receive an adequate ‘dose’, as well as in cross-sector partnership and as part of a coherent and well-functioning service system.

The evidence indicates that:

the best early child development interventions take place in comprehensive, integrated programs that combine nurturing and care, nutrition and stimulation. They begin early, preferably during pregnancy, and are sustained through primary school (McCain, Mustard & Shankar 2007).

Without investing in co-design and quality implementation and ensuring that programs communicate the core messages of child

development science in ways that resonate with the expectations and beliefs of Aboriginal and Torres Strait Islander parents, families and communities, their impact will be limited.

Recommendations

Based on the strength of evidence, impact (i.e. effect size), likely reach, ‘implementability’, and potential for scalability and sustainability, the interventions that could be considered for promoting a healthy start to life for Aboriginal and Torres Strait Islander children include the following.

- » **Sustained nurse home visiting programs:** rigorously designed and well-implemented nurse home visiting programs are among the most effective and rigorously evaluated early childhood interventions, and hold significant promise for improving outcomes for Aboriginal and Torres Strait Islander children. Sustained home visiting should be prevention-focused, embedded within existing universal maternal and child health services, and available to families with potential vulnerabilities, not just those in crisis. The evidence indicates that effective sustained nurse home visiting programs address parenting skill development and early learning, alongside maternal and child health.
- » **Home learning programs:** there is significant potential for home learning programs that equip parents and families to provide developmentally rich home learning environments, support children’s transition to school, and recognise and build on the strengths of Aboriginal and Torres Strait Islander approaches to teaching young children. These programs should be promoted as universal interventions, and efforts should be made to foster greater integration between early learning and maternal and child health.
- » **Parenting programs:** further work is needed to identify the program components and delivery modes that are most effective for Aboriginal and Torres Strait Islander families, but evidence-based, replicable and well-implemented parenting programs can have a significant impact on children’s wellbeing and current efforts to adapt and refine parenting programs should continue to be supported.

In addition to specific interventions, the following range of conditions appears to be essential components of effective implementation.

- » **Co-design and ‘cultural fit’:** although the importance of consultation with communities and Elders is now widely recognised, co-design requires the active and ongoing participation of community members in the processes of identifying needs, designing and delivering programs, program governance and evaluating program effectiveness. Co-design approaches are essential for ensuring community ownership, but are also central to developing the ‘cultural fit’ of a program—the extent to which it resonates with the beliefs, values and frames of reference of specific communities, and therefore its ability to recognise strengths and foster behaviour change.
- » **Implementation support and coaching:** specialised implementation support contributes to organisational capacity building and knowledge transfer while helping to build the evidence base around program efficacy for Aboriginal and Torres Strait Islander families. One promising example of this approach is the role that Indigenous organisation Ninti One will play in the Australian Government’s Stronger Communities for Children program, identifying appropriate evidence-based interventions and supporting program adaptation.
- » **Investing in evaluation:** the absence of evidence of effectiveness regarding health, early learning and parenting programs for Aboriginal people does not necessarily mean that existing programs are not having a positive impact on children. However, in the absence of robust data and publically available evaluation reports, it is difficult to make judgments about the relative effectiveness and the cost benefit of different approaches. Investment in evaluation, including action research, would contribute significantly to the evidence base.

Improving outcomes for Aboriginal and Torres Strait Islander children across Australia will take more than just a programmatic approach. A systemic approach is needed, with a shared focus and commitment across health, parenting and early learning services and continued work to enhance the accessibility of universal services for Aboriginal and Torres Strait Islander families.

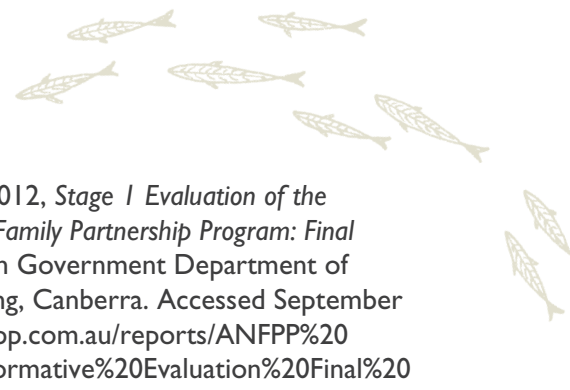
Furthermore, an integrated approach to early childhood should be a clearly identified priority area in key policy frameworks, such as the National Aboriginal and Torres Strait Islander Health Plan (Australian Government 2013), the Aboriginal and Torres Strait Islander Education Action Plan (MCEECDYA 2010), and the Belonging, Being, Becoming: The Early Years Learning Framework (Australian Government 2011).

Conclusion

An opportunity exists to make a real difference for Aboriginal children, families and communities. To be successful, this opportunity requires:

- » a committed and careful process of implementation of early childhood programs nationally, based on interventions that are well supported by evidence of benefit
- » a respectful process of engagement and tailoring offered to each Aboriginal and Torres Strait Islander community
- » sufficient flexibility to incorporate local priorities and build on local strengths while retaining the basic logic of the program
- » good data collection and sound evaluation to inform the progressive implementation of the program and to generate good knowledge of its value.

We recommend that governments and bodies with expertise in this area take up this opportunity as a priority.



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Paper 3

**Effective interventions to
promote a healthy start in life:
Evidence-based programs for
Aboriginal and Torres Strait
Islander children and their
families (Report)**

Dr Charlene Smith and Dr Stacey Fox, ARACY
September 2014



Paper 3 – Effective interventions to promote a healthy start in life: Evidence-based programs for Aboriginal and Torres Strait Islander children and their families (Report)

Introduction	25
The evidence reviews	26
Understanding evidence	26
What does ‘evidence-based’ mean?	26
Levels of evidence	26
Measuring outcomes	27
Evidence hierarchy	27
Systematic review	27
Randomised controlled trials with replication and follow up	27
Randomised controlled trials	28
Quasi-experimental studies	28
Pre-post studies	28
Observational studies	29
Using the best evidence	29
Rating evidence	30
Cost effectiveness of early childhood programs	31
A note on context-specific evidence	31
Evidence review	32
Maternal and child health interventions	32
Australian Nurse-Family Partnership Program (ANFPP)	32
Maternal Early Childhood Sustained Home-visiting (MECSH)	34
Strong Women, Strong Babies, Strong Culture	36
Mums & Babies program	38
Early learning interventions	40
Parents as Teachers (PAT)	40
The Abecedarian Project	42
HighScope Perry Preschool Program	44
Home Instruction for Parents of Preschool Youngsters (HIPPPY)	46
Families as First Teachers (FaFT)	48
It Takes Two to Talk: The Hanen Program for Parents	50
Mobile Preschool Program	52
Positive parenting interventions	54
Triple P Positive Parenting Program	54
Parent Child Interaction Therapy	56
Parents Under Pressure (PuP)	58
Let’s Start	60
Family Wellbeing Program	62
Incredible Years	64
Integrated service delivery	66
Best Start	66
Whānau Ora	68
Appendix A: Endorsements	70
Bibliography	72



Paper 3 – Effective interventions to promote a healthy start in life: Evidence-based programs for Aboriginal and Torres Strait Islander children and their families (Report)

Dr Charlene Smith and Dr Stacey Fox, ARACY
September 2014

Introduction

The early years play a critical role in shaping children's longer-term health, learning and wellbeing outcomes, with the effects of experiences in the first five years seen in emotional wellbeing, physical and mental health outcomes, and educational attainment in adulthood (ARACY 2014). Early childhood has been identified as a key period for public policy to influence long-term health and wellbeing outcomes (Irwin, Siddiqi & Hertzman 2007). The importance of the early years is recognised in the policy and legislative frameworks of all Australian states and territories, and features in a number of initiatives at the federal level. In July 2009 the Council of Australian Governments agreed to a National Early Childhood Development Strategy to guide investment in reforms to support children and their families. This strategy acts to 'guide Australia's comprehensive response to evidence about the importance of early childhood development and the benefits—and cost-effectiveness—of ensuring all children experience a positive early childhood' (COAG 2009, p. 4).

The Nest is an action agenda facilitated by ARACY that outlines a national action plan for child and youth wellbeing and has identified 'Improving early childhood learning and development' as one of six priorities to make a difference in 'turning the curve' for Australia's young people (ARACY 2014, p. 3). This is especially important for young Aboriginal and Torres Strait Islander Australians who continue to face a significant gap across a range of indicators when compared to their non-Indigenous peers, as demonstrated in ARACY's Report Card: The Wellbeing of Young Australians (ARACY 2013a).

For example, low birth weight rates for Indigenous Australian infants are significantly higher than for non-Indigenous Australians and Indigenous children are more likely to be in out-of-home care, more likely to live in relative poverty, more likely to live in jobless families, and three times as likely to start school with physical and cognitive developmental vulnerabilities (ARACY 2013a).

The most effective approaches to promote a healthy start in life are evidence-based preventive programs that are effective in engaging and retaining Aboriginal and Torres Strait Islander families and communities. As stated in the Australian Medical Association's Aboriginal and Torres Strait Islander Health Report Card 2012–2013, 'a much greater proportion of the national expenditure on Aboriginal and Torres Strait Islander health, education and human services must be invested in evidence-based measures for the early years' (AMA 2013, p. 10).

A synopsis of effective interventions produced for the Lowitja Institute by ARACY (Paper 2 in this report) identifies a number of programs that show promise for improving health and wellbeing outcomes for Aboriginal and Torres Strait Islander children. It is not an exhaustive list, but addresses key domains of wellbeing, includes international best practice programs, and is intended to guide decision makers and help them access information about evidence-based programs aligned with the outcomes they seek.

The evidence reviews

This third paper in this series provides detailed information for each intervention, including:

- » target audience and objectives
- » level of evidence
- » mode of delivery
- » history of implementation with Aboriginal and Torres Strait Islander communities
- » endorsements from existing ‘best practice’ reviews and databases.

The interventions are ordered according to category and then to level of evidence, with the most well-supported programs listed first. Where programs within a category were found to have the same level of evidence, they are listed alphabetically. The broad categories of maternal and child health, early learning, positive parenting and integrated service delivery used in Paper 2 are retained in the evidence review since each category has specific aims, outcomes and delivery contexts that make direct comparison potentially challenging. For example, it is valuable to rank the evidence for different approaches to delivering maternal and child health services or for different parenting programs, but not always helpful to compare a parenting program with a maternal and child health program. Comprehensive cost benefit data were not available for all programs, and as such this review does not rank by cost effectiveness.

This paper also provides an overview of the meaning of evidence-based programs, including definitions of levels of evidence and an explanation of the evidence rating scheme used in the review.

Understanding evidence

What does ‘evidence-based’ mean?

Best practice in health and social policy and practice involves utilising (and building) the highest quality available evidence, with a clear focus on improving outcomes for children and families. In this context, ‘evidence-based’ refers to programs that have been developed with the application of reliable knowledge, are underpinned by a strong and coherent theory of change, have been subject to rigorous research and testing, and have been demonstrated, through robust evaluation, to be effective in improving outcomes (Smith & Sweetman

2010; Tapper & Phillimore 2012; WWFC 2003; Metz et al. 2007; NHMRC 2009; Nutley 2010). The evidence-based programs considered in this paper demonstrate positive outcomes for early childhood health and wellbeing, including behaviours, social, emotional and cognitive development, poverty, education and participation.

The strongest evidence for effectiveness is produced when programs show results in numerous studies and when implemented at different times, in different contexts, and by different staff or practitioners.

Evidence-based programs vary in complexity. Some have a very specific and narrow focus, targeting a particular outcome or behaviour. Others have multiple components that bundle together a range of strategies.

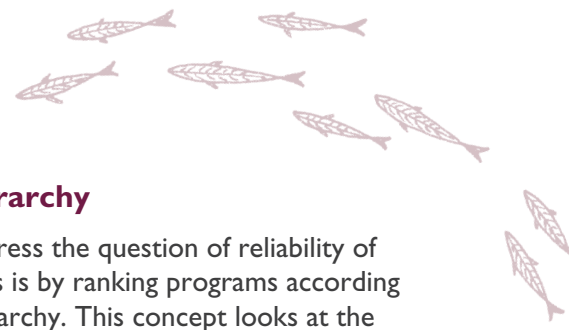
In developing policy and services for Aboriginal and Torres Strait Islander peoples, in particular, the best guide of effectiveness is if research has been conducted on delivery and outcomes with Indigenous people in communities.

Unfortunately, especially in programs delivered to Aboriginal and Torres Strait Islander communities, Australia has countless pilot programs but very few rigorous evaluations. This means policymakers and service delivery managers cannot be confident that the programs work, whether they are ineffective or, in the worst case, whether they are causing harm.

Program funding should be directed towards services and approaches with demonstrated benefits. This is why it is important to conduct ongoing evaluation for programs—so that new and innovative approaches can be shown to work, and so that those approaches that are not achieving their objectives can be discontinued.

Levels of evidence

There are two broad approaches to research: quantitative and qualitative. Quantitative research uses statistical data to measure, estimate and report on outcomes. Qualitative research seeks to understand and explain, to explore ideas and reasoning. Both approaches are valuable: ‘quantitative research can tell us about the probable effectiveness of services; qualitative research can give us an insight into what experiences of services are likely to be’ (SETF 2008:3.2). For example, randomised controlled trials (RCTs) are the only



studies that can definitively measure cause and effect and attribute change specifically to the delivery of a program, while longitudinal studies are the only ones that can track changes over time and capture long-term outcomes. However, RCTs are not appropriate for all investigations because they do not give qualitative answers, such as why certain approaches work and how the people involved felt about the programs being tested. They are also highly complex to administer and are not feasible in all circumstances.

Quantitative research designs include pre-post studies, quasi-experimental studies, RCTs and systematic reviews. Qualitative research methods include interviews, focus groups and observational studies (SETF 2008:3.3, 3.8). Mixed-method studies use qualitative and quantitative methodologies.

Measuring outcomes

As well as research design, an important element of program assessment is the outcomes, or effects, attributable to the program. The distinction between outputs and outcomes is particularly important—outputs are the components or activities undertaken as part of the program; outcomes are the (positive or negative) impacts of those activities. A program that is rated as effective is one that has robust research evidence demonstrating positive outcomes. Effectiveness research is necessary to show whether strategies are having impacts on their intended outcomes (Puddy & Wilkins 2011:12).

Effectiveness can vary with location, duration, audience and dose (quantity of delivery), which is why it is best to have numerous rigorous evaluations to demonstrate whether programs can be successfully replicated or adapted, and to determine the optimum dose and intensity for achieving the desired outcomes. For example, an early learning program might be effective, but only if a child receives a minimum of 20 hours of exposure over a particular period of time, with the best outcomes achieved for the children who receive more than 30 hours. Similarly, the optimum duration and intensity of sustained nurse home visiting programs varies depending on the desired outcomes (McDonald, Moore & Goldfeld 2012). Robust outcomes-focused research enables nuanced answers to the question of ‘what works’ and can enhance the efficiency and impact of investment in child and family programs.

Evidence hierarchy

One way to address the question of reliability of research findings is by ranking programs according to evidence hierarchy. This concept looks at the effectiveness of a given program by aggregating the level and type of research evidence available (Head 2010:17). It is widely acknowledged that certain kinds of research provide more reliable evidence of the effectiveness or impact of a program or practice (AIFS 2013).

The more reliable and robust research approaches provide more trustworthy evidence (SETF 2008:2.3). This is important for decision makers because the more rigorous the research design, the higher its internal validity (i.e. the degree to which outcomes can be directly attributed to the program) (Puddy & Wilkins 2011:13).

A hierarchy of research evidence widely used in evidence-based medicine has also been applied to other health and social policy and practice areas (Figure 3.1). The higher up the pyramid a methodology is ranked, the more robust it is assumed to be (Barratt 2009).

Systematic review

Meta-analyses and expert reviews are two forms of systematic review and aim to comprehensively identify, appraise and synthesise all relevant studies on a given topic (SETF 2008:3.4). These are the strongest forms of evidence because they comprise research findings from multiple experimental and/or quasi-experimental studies.

Randomised controlled trials with replication and follow up

Independent replication of a program demonstrates whether or not it can be implemented with other participants and produce the same effects. Replicated RCTs are useful to establish the strength of a program and its outcomes, and to test whether it can be successfully implemented with participants beyond the initial study cohort. RCTs that include a longitudinal element—ongoing monitoring and follow up for several years—are especially valuable to establish whether a program has lasting effects or whether its effects fade over time (SETF 2008:3.5).

The next two levels of evidence include control groups whose outcomes are compared to recipients of the program.

Randomised controlled trials

RCTs are considered the strongest research design for establishing a cause-effect relationship (Puddy & Wilkins 2011:17). RCTs involve a control group whose members are experiencing the same life circumstances and reflect the same demographic details as the group receiving the program and who receive no treatment or the same type of care they would have normally received. Participants are randomly assigned either to the control or treatment group. This randomisation greatly reduces the possibility of bias and means that the only significant difference between the two groups is that one group receives the program. This is how the specific impact of the program is isolated from other things influencing the families in the study.

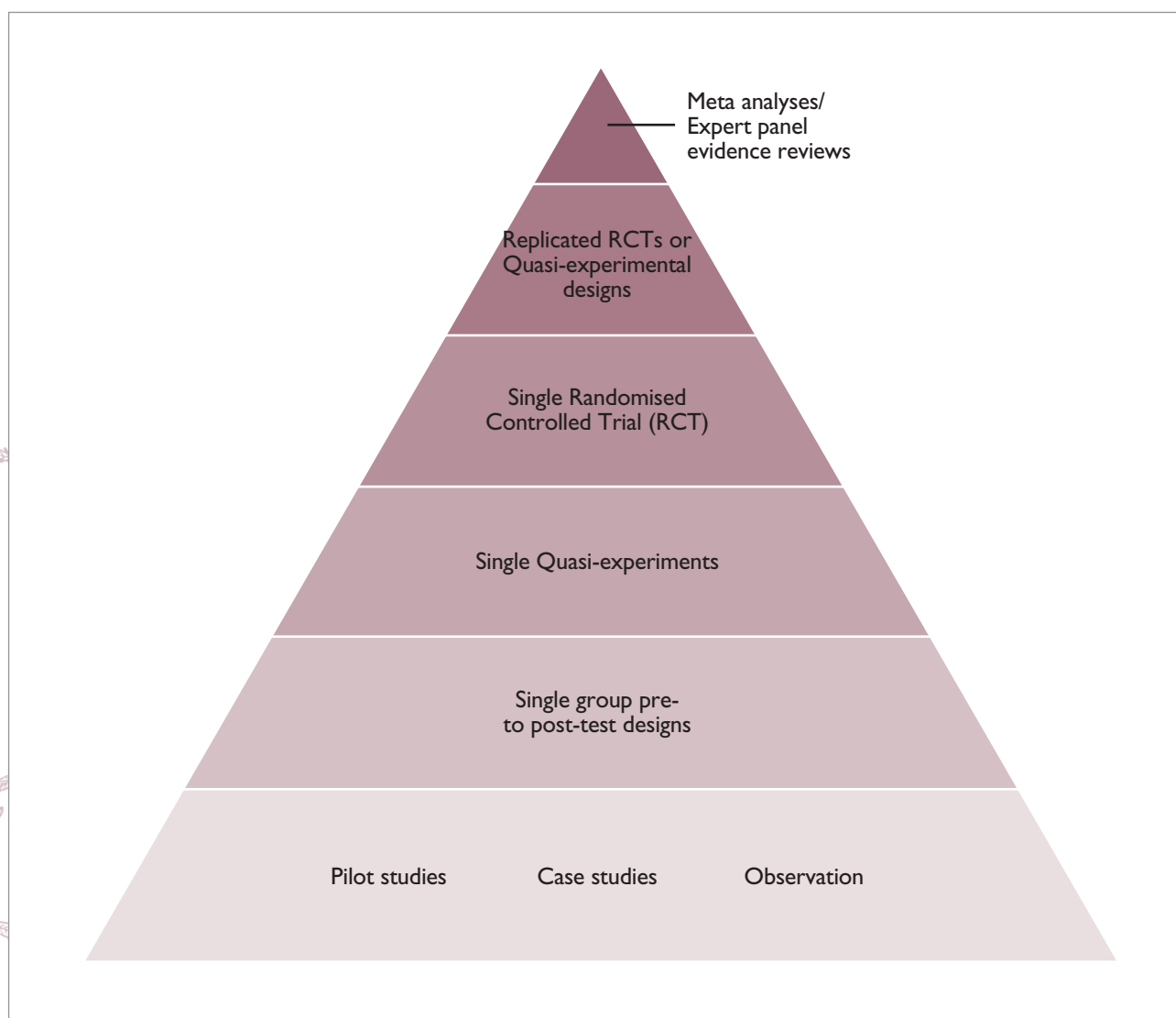
Quasi-experimental studies

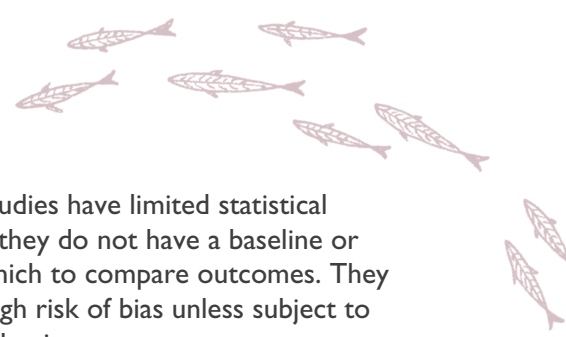
Quasi-experimental studies use multiple groups or include multiple measurement points. These designs are considered to be rigorous, but they are not as rigorous as RCTs because participants are not randomly assigned to treatment and control conditions and, therefore, the different groups may not experience the same circumstances—making it harder to isolate the specific impact of the program (Puddy & Wilkins 2011:17).

Pre-post studies

Single group design does not include a control or comparison group and is less rigorous as a result. Pre- to post-test or pre-post studies involve assessing a population before an intervention is

Figure 3.1: Pyramid of evidence hierarchy (redrawn from Federal Register 2006)





provided (to provide a baseline measure) and again after the intervention to determine whether there has been a change over time. Some pre-post studies also include a follow-up assessment, which is taken at specific times after the intervention has finished (SETF 2008:3.7).

Observational studies

Two forms of observational studies are case-control and cohort studies. A case-control study is designed to help determine if an exposure to a particular factor is associated with an outcome (such as a disease or condition of interest). Case-control studies are always retrospective because they start with an outcome and trace it back to identify causes. The process involves identification of cases (a group known to have achieved the desired outcome) and the controls (a group known to not have the outcome). This is followed by retrospective comparison to learn which subjects in each group had the exposure(s), comparing the frequency of the exposure in the case group to the control group.

A cohort study involves observation over time of a group that has been exposed to a particular variable. This group is then compared to a similar group that has not been exposed to the variable. Cohort studies can be either prospective or historical.

Pilot and case studies have limited statistical validity because they do not have a baseline or controls with which to compare outcomes. They also present a high risk of bias unless subject to independent evaluation.

Using the best evidence

In social policy fields, particularly, it is not always possible to use the highest levels of evidence. There are relatively few child and family wellbeing programs supported by top-tier evidence and even fewer of these programs have been tested with Aboriginal and Torres Strait Islander families. Further, given the limited range of evidence-based programs, there remains a need for innovation and the further development of the evidence base.

Although the ideal approach is to use programs supported by multiple RCTs (with long-term follow up) that are tested in the populations and contexts in which they will be implemented, this is not always possible. Using the best evidence involves working with the information and evidence available, whether that information is emerging, promising or informed by research from a related field or smaller-scale studies (Figure 3.2), ideally combined with a commitment to building that evidence base.

Figure 3.2: Using available evidence (Samuels 2014)



Another key consideration for using evidence-based programs is the match between the intervention and the needs of the family or community. The selection of evidence-based programs should take into account the history and context of the child, family and community and the wellbeing outcomes sought or issues that need to be addressed.

Rating evidence

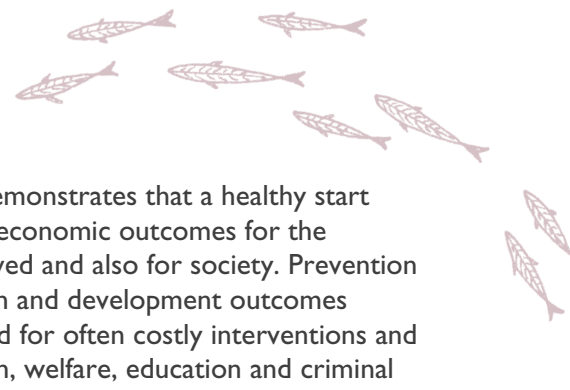
In order to make decisions based on best evidence, it is important to rate programs according to both the quality of available research evidence and the outcomes that have been demonstrated. For the purposes of this evidence review, ARACY used the Rapid Evidence Assessment rating scheme used by the Parenting Research Centre (PRC) in its review

of parenting interventions in Australia (PRC 2012) (Table 3.1). This ranking system was used because it is expansive enough to include the breadth of evaluation approaches used in human services and social policy while also privileging rigour and RCT-level evidence. The language used in the framework is accessible and provides clarity to service delivery agencies and government.

However, many promising programs have not been evaluated in a long-term, experimental manner. This does not mean such programs are not effective or have not been evaluated and show promise, but it does mean that we cannot yet reliably quantify their likely impact across contexts. As such, their ranking on rating scales will be lower than those that have been subject to rigorous research approaches.

Table 3.1: Rapid Evidence Assessment rating scheme (adapted from PRC 2012:17)

Well supported	<ul style="list-style-type: none"> » No evidence of risk or harm » If there have been multiple studies, the overall evidence supports the benefit of the program » Clear baseline and post-measurement of outcomes for both conditions » At least two RCTs have found the program to be significantly more effective than comparison group. Effect was maintained for at least one study at one-year follow-up
Supported	<ul style="list-style-type: none"> » No evidence of risk or harm » If there have been multiple studies, the overall evidence supports the benefit of the program » Clear baseline and post-measurement of outcomes for both conditions » At least one RCT has found the program to be significantly more effective than comparison group. Effect was maintained at six-month follow-up
Promising	<ul style="list-style-type: none"> » No evidence of risk or harm » If there have been multiple studies, the overall evidence supports the benefit of the program » Clear baseline and post-measurement of outcomes for both conditions » At least one study using some form of contemporary comparison group demonstrated some improvement outcomes for the intervention but not the comparison group
Emerging	<ul style="list-style-type: none"> » No evidence of risk or harm » There is insufficient evidence demonstrating the program's effect on outcomes because: » the designs are not sufficiently rigorous (i.e. they do not meet the criteria of the above programs) OR » the results of rigorous studies are not yet available
Failed to demonstrate effect	<ul style="list-style-type: none"> » No evidence of risk or harm » Two or more RCTs have found no effect compared to usual care OR the overall weight of the evidence does not support the benefit of the program
Concerning practice	<ul style="list-style-type: none"> » There is evidence of harm or risk to participants OR the overall weight of the evidence suggests a negative effect on participants



Cost effectiveness of early childhood programs

The lack of Australian cost benefit data for early childhood development, health and wellbeing programs is widely recognised and it is very difficult to judge the interventions that will be the most effective and most cost effective to achieve the outcomes sought.

For policymakers and service providers, it is important to understand the specific outcomes achieved by a program or approach, the size and scale of those impacts (whether they have a small, moderate or high level of impact) and the relative cost of achieving those outcomes. Such an understanding would be of great benefit and would enable those funding and implementing programs or approaches to better match interventions to the needs of communities and to identify the most cost-effective way of achieving the intended outcomes. Currently, the lack of Australian cost benefit data means this is difficult to do.

We can, however, say with confidence that the evidence of the benefits of investing in the early years is compelling. In particular, the work of Nobel Prize-winning University of Chicago Economics Professor James Heckman demonstrates the great gains to be had by investing early to support development, especially for children facing social and economic disadvantage. Heckman (2006:1902) argues:

Early interventions targeted toward disadvantaged children have much higher returns than later interventions such as reduced pupil teacher ratios, public job training, convict rehabilitation programs, tuition subsidies, or expenditure on police. At current levels of resources, society overinvests in remedial skill investments at later ages and underinvests in the early years.

This research demonstrates that a healthy start in life improves economic outcomes for the individuals involved and also for society. Prevention of adverse health and development outcomes reduces the need for often costly interventions and services in health, welfare, education and criminal justice systems while at the same time leading to increased earning capacity and therefore taxation revenue.

A note on context-specific evidence

The majority of evidence-based programs have not been tested through RCTs in Australia (let alone in Aboriginal or Torres Strait Islander communities or contexts), and even the best-supported programs have not necessarily been independently tested with multiple cohorts or populations, although there are a small number of exceptions to this. The only way forward from here is to draw on the best available evidence and to drive more consistent collection of outcomes data and investment in impact evaluation.

Implementation processes—including establishing appropriate policies and processes, ensuring adequate staff capacity, monitoring implementation and change processes, and delivery at scale—are essential for the success of evidence-based programs. Without effective implementation, workforce capacity and underpinning system enablers, programs are unlikely to be effective.

Evidence review

Maternal and child health interventions

Australian Nurse-Family Partnership Program (ANFPP)

An intensive home visiting program aimed at supporting vulnerable pregnant women and their families. The program is an adaptation of the Nurse-Family Partnership (NFP) program designed in the 1970s. It is a structured, sustained program that starts during pregnancy and continues until a child is two years old.

Targets

- » Audience: pregnant Aboriginal and Torres Strait Islander mothers and their babies.
- » Objectives: the ANFPP shares the same overarching long-term goals as the NFP, which are to:
 - improve pregnancy outcomes by helping women engage in good preventative health practices
 - improve child health and development by supporting parents
 - improve parents' life course by helping parents to develop a vision for their own futures, including continuing education and finding work (Ernst & Young 2012:7).

Mode of delivery

Home visiting program

Staff structure

Nurse Supervisor manages the day-to-day operations of the service and provides supervision and support to up to eight Nurse Home Visitors and Family Partnership Workers. Nurse Home Visitors undertake home visits with a case load of up to 25 mothers. Family Partnership Workers provide the interface between the Indigenous community/families and the program and assist in recruitment, program promotion and ensuring cultural safety. The Administration Officer provides administrative support to the program.

Delivery to Aboriginal and/or Torres Strait Islander families: YES

Evaluation

- » Level of evidence:
 - formative evaluation (Ernst & Young 2012)
 - ANFPP is based on NFP, which has been evaluated on multiple occasions internationally and has been shown to be effective in improving a range of outcomes relating to child mental health and behaviour, child cognitive development, child abuse and neglect, and home environment.
- » Effectiveness:
 - ANFPP: promising
 - NFP: well-supported.



Evaluation outcomes

- » ANFPP: initial evaluation found a number of areas of improved outcomes and recommended the program should continue in the sites in which it has been implemented. The evaluation report noted:
 - increased confidence and competence of mothers
 - mothers reported strong relationships with home visitors
 - signs of mother/baby attachment and appropriate mother/child interactions
 - other positive outcomes, including maternal health (e.g. reduction in smoking), life course development (e.g. mothers enrolling in further education), and creation of safe environments for infants and children.
- » NFP: demonstrated a pattern of sizable, sustained effects on important child and maternal outcomes in three well-conducted RCTs. The specific types of effects differed across the three trials, possibly due to differences in the populations treated. Effects found in two or more trials include (i) reductions in child abuse/neglect and injuries (20–50%); (ii) reduction in mothers' subsequent births (10–20%) during their late teens and early twenties; and (iii) improvement in cognitive/educational outcomes for children of mothers with low mental health/confidence/intelligence (e.g. 6 percentile point increase in Grade 1–6 reading/mathematics achievement) (Coalition for Evidence-Based Policy 2012).

Note

ANFPP is subject to proprietary restrictions. More information about implementing the program is available on the Nurse-Family Partnership website (www.nursefamilypartnership.org).

Also see the ANFPP website (www.anfpp.com.au).

Endorsements

ANFPP: Recommended (Catalogue of Evidence); Promising (Building Blocks, 2014).

NFP: model program (Blueprints); Listed (Child Trends; SAMHSA); Top tier (Coalition for Evidence-Based Policy); Effective (HomVEE); Well supported (PRC, 2013; The Nest); Proven (PPN).

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Maternal and child health interventions

Maternal Early Childhood Sustained Home-visiting (MECSH)

Including right@home and Bulundidi Gudaga.

MECSH is a structured program of sustained nurse home visiting for families at risk of poor maternal and child health and development outcomes. The MECSH program is delivered as part of a comprehensive integrated approach to services for young children and their families.

right@home is an extension of the MECSH model and includes additional modules to enhance the home learning environment. It is currently the subject of a multi-state RCT, with preliminary results to be published in late 2016.

Bulundidi Gudaga is a MECSH-based program targeted at Aboriginal families. A clinical trial is underway in Western Sydney to examine whether or not this sustained home visiting program is as effective in improving outcomes for Aboriginal children and their families as it has been shown to be for a non-Aboriginal cohort. Preliminary results will be available in 2016.

Targets

- » Audience: pregnant mothers and their babies up to 24 months.
- » Objectives:
 - improve transition to parenting by supporting mothers through pregnancy
 - improve maternal health and wellbeing by helping mothers to care for themselves
 - improve child health and development by helping parents to interact with their children in developmentally supportive ways
 - develop and promote parents' aspirations for themselves and their children
 - improve family and social relationships and networks by helping parents to foster relationships within the family and with other families and services
 - Bulundidi Gudaga: build strong partnerships between Aboriginal and mainstream services to ensure that Aboriginal infants, children and their mothers have access to appropriate health services.

Mode of delivery

Home visiting program delivered by child and family health nurses who are embedded within universal child and family health nursing services.

Delivery to Aboriginal and/or Torres Strait Islander families:

Yes—Bulundidi Gudaga currently subject of RCT

Evaluation

- » Level of evidence: RCT (Kemp et al. 2008).
- » Effectiveness: promising



Evaluation outcomes

- » ANFPP: initial evaluation found a number of areas of improved outcomes and recommended the program should continue in the sites in which it has been implemented. The evaluation report noted:
 - increased confidence and competence of mothers
 - mothers reported strong relationships with home visitors
 - signs of mother/baby attachment and appropriate mother/child interactions
 - other positive outcomes, including maternal health (e.g. reduction in smoking), life course development (e.g. mothers enrolling in further education), and creation of safe environments for infants and children.
- » NFP: demonstrated a pattern of sizable, sustained effects on important child and maternal outcomes in three well-conducted RCTs. The specific types of effects differed across the three trials, possibly due to differences in the populations treated. Effects found in two or more trials include (i) reductions in child abuse/neglect and injuries (20–50%); (ii) reduction in mothers' subsequent births (10–20%) during their late teens and early twenties; and (iii) improvement in cognitive/educational outcomes for children of mothers with low mental health/confidence/intelligence (e.g. 6 percentile point increase in Grade 1–6 reading/mathematics achievement) (Coalition for Evidence-Based Policy 2012).

Note

ANFPP is subject to proprietary restrictions. More information about implementing the program is available on the Nurse-Family Partnership website (www.nursefamilypartnership.org).

Also see the ANFPP website (www.anfpp.com.au).

Endorsements

Recommended (Catalogue of Evidence); Effective (HomVEE); Promising (PRC, 2012).

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Strong Women, Strong Babies, Strong Culture

A bicultural community development program that respects and supports Aboriginal ways of promoting good health in women and babies during pregnancy and early parenting:

Aboriginal women deliver the program to Aboriginal women, combining traditional Aboriginal and current Western knowledge. Aboriginal Grandmothers [Strong Women Workers] and identified younger women use the program to promote strong women and strong babies by supporting and passing on traditional ways to pregnant mothers and keeping the Grandmothers Law alive. (Northern Territory Department of Health and Families 2009:2)

The program aims to:

- » provide culturally appropriate education to adolescent girls regarding pregnancy and birth
- » provide pregnancy, birth, postnatal, women's health and child health education to pregnant women and mothers of infants and young children
- » address the modifiable risk factors during pregnancy for low birth weight; for example, nutrition, substance abuse, hygiene, homemakers program, male partners support, early pregnancy care attendance.

Targets

- » Audience: young pregnant Aboriginal women.
- » Objectives:
 - increase involvement in cultural ceremonies and tradition for women
 - ensure that families support and care for women during pregnancy
 - encourage women to access early pregnancy care
 - increase nutritional status and weight gain during pregnancy
 - decrease the rate of infections during pregnancy
 - improve growth and nutritional status of children 0–12 months
 - provide appropriate postnatal education
 - decrease rates of substance abuse during pregnancy (such as smoking and alcohol consumption). (Northern Territory Department of Health and Families 2009:3).

Mode of delivery

Delivered by Strong Women Workers, senior women within Aboriginal communities who help and support young pregnant women during their pregnancies through centre-based, outreach and community engagement.

Delivery to Aboriginal and/or Torres Strait Islander families

Yes

Evaluation

- » Level of evidence: comparative study with historical control group (Mackerras 1998, 2000); pre- and post-testing (population data regarding birth weight, comparison communities) (d'Espaignet et al. 2003).
- » Effectiveness: promising.



Evaluation outcomes

Mackerras (1998, 2001) found:

- » mean gestational age (weeks) at first antenatal visit reduced 19.1 (standard deviation (SD) 6.8) to 18.4 (SD 7.8)
- » the percentage of women initiating care in the first trimester increased 16.7–24.4%
- » preterm birth in pilot communities reduced by 9.3% (control: no statistically significant change)
- » birth weight <2500 grams in pilot communities reduced by 8% (control: no statistically significant change)
- » mean birth weight in pilot communities increased by 108 grams (control: no statistically significant change).

D’Espaignet et al. (2003) assessed changes in perinatal health following the introduction of the program (which commenced in 1993) and found:

- » birth weight <2500 grams in pilot communities reduced by 4.4% (control: no statistically significant change)
- » mean birth weight in pilot communities increased by 135 grams (control: no statistically significant change).
- » In later intervention groups (commenced in 1996 and 1997) non-significant increase in mean birth weight (42 grams) and reduction in low birth weight (17–13%) were recorded.

Endorsements

Recommended (Catalogue of Evidence); Promising (Building Blocks, 2014; *The Nest*); NHMRC Level IV; Level III-2 (CtGC); Successful (Herceg).

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Maternal and child health interventions

Mums & Babies Program

The Mums & Babies program is a model of shared antenatal care delivered by an Aboriginal Health Service. It involves a multidisciplinary team with a high proportion of Indigenous staff and provides comprehensive antenatal care, postnatal care, immunisations, growth monitoring, and developmental screening and hearing screening for pregnant women, families, infants and young children.

Targets

- » Audience: all women attending antenatal care through an Aboriginal and Islander Health Service.
- » Objectives:
 - increased service usage
 - improved antenatal attendance and care
 - reduction in preterm births
 - increase in mean birth weight.

Mode of delivery

Clinic based—including comprehensive antenatal and postnatal care, immunisation and child health monitoring, early education and care and playgroup on site, and provision of transport.

Delivery to Aboriginal and/or Torres Strait Islander families

Yes.

Evaluation

- » Level of evidence: prospective cohort study (Panaretto et al. 2005) with before and after evaluation of a quality improvement intervention, using historical control group to provide data for comparative analysis.
- » Effectiveness: promising.



Evaluation outcomes

A prospective cohort study of Aboriginal and Torres Strait Islander women attending Townsville Aboriginal and Islander Health Service for shared antenatal care was conducted between 2000 and 2003 with comparison made to a previous cohort of women attending between 1998 and 1999 (Panaretto et al. 2005, 2007).

Panaretto et al. (2005) found that after four years the program resulted in increased antenatal visits, with more women coming to antenatal care earlier in their pregnancies and less women having inadequate antenatal care. Although the average birth weight improved for the women in the program (compared to women receiving care prior to the program's introduction), this was not statistically significant (Panaretto et al 2005). The improvement in birth weight was probably influenced by the significant decrease in preterm births, although this was likely driven by the reduced risk profile of women attending the program.

There were no changes in perinatal mortality after four years; however, a follow-up analysis at seven years found 'previously reported gains have been sustained and the reduction in preterm births has now translated into significantly reduced perinatal deaths' (Panaretto et al. 2007). The authors note that the major limitation of the study is its selection bias—both the historical control and Mothers and Babies Program groups were self-selected—meaning the causative factors for the improved perinatal outcomes are debatable.

Endorsements

Recommended (Catalogue of Evidence); Best practice (Building Blocks, 2012); NHMRC Level III-2 (CtGC); Successful (Herceg).

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Early learning interventions

Parents as Teachers (PAT)

PAT is a home visiting program for parents and spans pregnancy and the first three years of life. The program provides information, support and encouragement to help parents engage with their children in ways that provide a strong foundation for children's development and family wellbeing. The program was developed in Missouri in the United States, with a pilot conducted in 1981.

The program consists of monthly home visits by trained parent educators, parent education group meetings and other services. The home visits last between 45 and 60 minutes. Participants can receive program services as long as they remain in the program. In the home visits, parent educators share age-appropriate child development information, help parents learn to observe their children, address parenting concerns and facilitate activities that provide parent/child interaction. In parent education group meetings, parents interact with other parents to share information and support one another.

Targets

- » Audience: parents of young children (antenatal to three years).
- » Objectives:
 - increase parent knowledge of early childhood development and improve parenting practices
 - provide early detection of developmental delays and health issues
 - prevent child abuse and neglect
 - increase children's school readiness and school success.

Mode of delivery

Monthly home visits, parent education group meetings.

Delivery to Aboriginal and/or Torres Strait Islander families

Yes (as participants in non-Indigenous specific cohorts).

Evaluation

- » Level of evidence: independent evaluation of PAT conducted in the United States includes four independent RCTs and seven peer-reviewed published outcomes studies.
- » In Australia: process evaluation (Watson & Chesters 2012); program included in evaluation of the New South Wales Community Services' early intervention program, Brighter Futures (Hilferty et al. 2010).
- » Effectiveness: well-supported.



Evaluation outcomes

Program evaluations and administrative data from exit surveys of participants over seven years indicate the PAT program in the Australian Capital Territory is highly valued by parents for its key program elements, particularly the program's focus on developing the skills and confidence of parents regarding their children's development. Key program features such as the child-focused nature of the program, its flexibility and its activity-based curriculum were all nominated as strengths by respondents to exit surveys conducted since 2003. The exit surveys also indicate a consistently high level of satisfaction with the program among parents over the past decade. The majority of program participants recommend that the program should be offered more widely so that more new parents have the opportunity to participate (Watson & Chesters 2012).

A summary of research from a 2006 study in Missouri found parents in PAT read more frequently to their young children and were more likely to enrol their children in preschool; 82% of poor children who participated with high intensity in both PAT and preschool entered kindergarten ready to learn, compared to only 64% of poor children who had no involvement in either service; and at third grade, 88% of poor children who participated with high intensity in both PAT and preschool reached a benchmark level of performance on the Missouri Assessment Program Communication Arts test, compared to 77% of poor children who had no involvement in either service. The pattern of results for both school readiness and third-grade performance was similar for more affluent children (93%:81% and 97%:93%) (Pfannenstiel & Zigler 2007).

Endorsements

Recommended (Catalogue of Evidence); Listed (Child Trends; SAMHSA); Effective (HomVEE); Promising (PPN); Well supported (*The Nest*).

Australian trial: NHMRC Level IV (CtGC).

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Early learning interventions

The Abecedarian Project

Including 3A Abecedarian Approach Australia.

The Abecedarian Approach is a suite of teaching and learning strategies that were developed for and tested in the Abecedarian Studies, three longitudinal investigations to test the power of high-quality early childhood services to improve the later academic achievement of children from at-risk and under-resourced families.

Children from low-income families receive full-time, high-quality educational intervention in a childcare setting from infancy through to age five. Each child receives an individualised prescription of educational activities. Educational activities consist of games incorporated into the child's day. Activities focus on social, emotional and cognitive areas of development but give particular emphasis to language.

The Abecedarian curriculum approach affirms that, in the first five years of life, education and caregiving cannot and should not be thought of as distinctly different activities. The phrase 'enriched caregiving' is intended to remind all of us (researchers, parents, caregivers, teachers, and program administrators) that 'care' for an infant or young child can and should do several things at once (Sparling 2010).

3A Abecedarian Approach Australia is an adaptation of the Abecedarian Approach for young Aboriginal children living in remote communities.

Targets

- » Audience: children 0–5 years.
- » Objectives:
 - build cognitive skills and positive attitudes to school by increasing opportunities for active learning
 - in the long-term, prevent delinquency and school dropout among 'high risk' children and improve their long-term futures .

Mode of delivery

Preschool program delivered on a full-day, year-round basis with low teacher to child ratio. Systematic curriculum of educational games emphasising language development and cognitive skills.

Delivery to Aboriginal and/or Torres Strait Islander families

Yes.

Evaluation

- » Level of evidence:
 - Abecedarian: several RCTs; the original RCT involved 120 families
 - 3A: yet to be evaluated.
- » Effectiveness: well-supported.



Evaluation outcomes

At the age 30 follow-up: compared to the control group, Abecedarian group members:

- » were 42% more likely to have been employed for at least 16 of the 24 months preceding the age-30 follow-up (75.0% of the Abecedarian group versus 53.0% of the control group)
- » were 81% less likely to have received welfare for a total of nine months or more between the ages of 22.5 and 30 years (3.9% for the Abecedarian group versus 20.4% for the control group)
- » were almost four times as likely to have graduated from college (23.1% for the Abecedarian group versus 6.1% for the control group)
- » completed 1.2 more years of education (an average of 13.5 years for the Abecedarian group versus 12.3 years for the control group)
- » were 1.8 years older when their first child was born (an average of 21.8 years of age for the Abecedarian group versus 20.0 years of age for the control group) (Campbell et al. 2012).

Endorsements

Listed (Child Trends); Promising (Coalition for Evidence-Based Policy); Proven (PPN); Well supported (The Nest).

3A: Promising (Building Blocks, 2014).

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Early learning interventions

HighScope Perry Preschool Program

This is a high-quality comparatively high dose and intensity preschool program with an evidence-based curriculum delivered by qualified early childhood teachers. The program aims to enhance children's cognitive, socio-emotional and physical development, imparting skills that will help them succeed in school and be more productive and responsible throughout their lives. The curriculum is based on the view that children are active learners who learn from what they do, as well as what they hear and see.

The curriculum has a version for infants and toddlers (birth to three years) and a version for preschool children (three to five years). Children participate in the preschool program for one to three years, with each year's teaching practices and curriculum content being developmentally and age appropriate.

Targets

- » Audience: children 0–5 years.
- » Objectives:
 - build cognitive skills and positive attitudes to school by increasing opportunities for active learning
 - in the long-term, prevent delinquency and school dropout among high risk children and improve their long-term futures.

Mode of delivery

Preschool based with some home visits. The classroom program meets for half-days (2.5 hours per day), five days a week for seven months of the year, with 90-minute weekly home visits by preschool teachers. The staff to child ratio is one adult for every five or six children. In addition, program staff facilitate monthly small group meetings of parents.

Delivery to Aboriginal and/or Torres Strait Islander families

No.

Evaluation

- » Level of evidence: the HighScope Perry Preschool Study (Weikart 1969) has been running for more than 40 years. From 1962–67, at ages three and four, the subjects were randomly divided into a program group that received a high-quality preschool program based on HighScope's participatory learning approach and a comparison group that received no preschool program (Schweinhart 2002). The subjects, 123 African-American academically high-risk preschool-age children (three and four years old) who were living in poverty, were randomly assigned to the Perry Preschool Program or a control group. Children in the treatment group attended preschool for half-days, five days a week from mid-October through May for two years. Data on academic and social outcomes were collected on both groups annually from ages three to 11, at ages 14–15, at age 19, at age 27 and at age 40. An independent team re-analysed the data for ages 19 to 40 to adjust for deviations from randomisation, the small sample size and multiple significance tests of non-independent outcomes.



There have been two replications of the program. One quasi-experimental design examined outcomes at post-test for a sample of 200 children from 26 HighScope programs in the state of Michigan. The other study randomly assigned 68 children aged three and four years to conditions that included a HighScope curriculum group and measured intellectual and school performance and social behaviour from ages three to 15 and at age 23.

- » Effectiveness: supported.

Evaluation outcomes

Long-term evaluation has shown program impacts on education and early employment outcomes for women, and on income, employment and criminality in men. The most recently published research paper on the original cohort found adults at age 40 who had attended the preschool program had higher earnings, were more likely to hold a job, had committed fewer crimes and were more likely to have graduated from high school than adults who did not have preschool attendance (Schweinhart et al. 2005).

Replication studies added findings to the main evaluation. Compared to the control children, treatment children:

- » had more initiative and better social relations but not higher scores on cognitive indicators
- » showed non-significant effects on official records of delinquent behaviour at age 15 but significant effects on felony arrests at age 23.

A cost benefit analysis conducted when the research subjects were 27 found every public dollar spent on the program saved \$7.16 in tax dollars (Barnett 1996).

Endorsements

Promising (Blueprints; Coalition for Evidence-Based Policy); Listed (Child Trends; SAMHSA); Proven (PPN); Supported (*The Nest*).

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Early learning interventions

Home Instruction for Parents of Preschool Youngsters (HIPPY)

HIPPY targets parents in the two years before their children start school. It aims to build on parents' strengths and help them create an enriched home environment that will promote the development of skills and confidence.

Targets

- » Audience: parents of young children.
- » Objectives: the program supports positive parental influences by developing foundations for learning and providing parents with confidence and skills to contribute to their children's learning environment.

Mode of delivery

There are four components: a curriculum of 30 weekly activity packets and nine storybooks each year for two years, for parents and children to work through together at home; fortnightly home visits by a parent tutor, who uses role play to model the activities; parent meetings on alternate fortnights to provide social support and reduce isolation; and a professional coordinator who trains and supports the tutors, who are also parents in the program.

Delivery to Aboriginal and/or Torres Strait Islander families

Yes.

In 2010 the program was established in two Indigenous-specific communities in the remote locations of Katherine (Northern Territory) and Pioneer (Mount Isa, Queensland). In addition, a number of HIPPY locations enrol a high number of Indigenous families; for example, HIPPY Inala, HIPPY La Perouse and HIPPY Alice Springs. The first 25 of the 50 communities targeting Aboriginal and Torres Strait Islander families commenced program delivery in 2014.

Evaluation

- » Level of evidence:
 - HIPPY international: numerous evaluations including RCTs and quasi-experimental studies; Westheimer 2003 compiled 17 evaluation studies of the program from researchers and practitioners in seven countries.
 - Australian evaluation: two-year quasi-experimental longitudinal design using a matched control group derived from the Longitudinal Study of Australian Children (Liddell et al. 2011). The five trial sites were evaluated and individual case studies made for each site. All sites had a high proportion of Indigenous families and two were Indigenous-only sites.
- » Effectiveness: promising.



Evaluation outcomes

Results of evaluations showed HIPPY parents compared with non-HIPPY parents were significantly less angry or hostile in their parenting style; did significantly more in-home and out-of-home activities with their children; reported their children liked being read to for longer periods of time in any one sitting; and were more involved in their children's learning and development and had greater contact with the schools.

Results from qualitative data indicate increased confidence to parent their children; increased confidence to talk to their children's teachers; improved parenting skills: patience and responding to difficult behaviour; better relationships between parents and children and improved quality time spent with their children; social connectedness from meeting other parents; more insight about school requirements and expectations; and better awareness of their children's skills, abilities and academic needs (Liddell et al. 2011).

Endorsements

Promising (AIFS; PRC, 2012; *The Nest*); Best practice (Building Blocks, 2012); Recommended (Catalogue of Evidence); Listed (Child Trends); NHMRC Level III-2 (CtGC); Effective (HomVEE); Other reviewed programs (PPN).

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Early learning interventions

Families as First Teachers (FaFT)

This early learning program is delivered exclusively for Aboriginal and Torres Strait Islander families with children from birth to school age. Adult capacity building is also provided through family support and by linking services within local communities.

School readiness is addressed through the FaFT—Indigenous Parenting Support Services Program in early learning groups with a focus on literacy and numeracy foundations, orientation to school programs and, as part of a dual generational approach, parent engagement initiatives.

The program involves:

- » Abecedarian program
- » dual generational playgroups
- » family literacy support
- » transition to preschool programs
- » parent education
- » community capacity-building activities.

Targets

- » Audience: Aboriginal and Torres Strait Islander families with children from birth to school age.
- » Objectives:
 - build family knowledge of early learning through active engagement in quality early childhood education programs
 - strengthen knowledge of child development through engagement in early learning programs, home visits, family workshops or individual consultations
 - build awareness of health, hygiene and nutrition as contributing factors to developmental outcomes
 - strengthen positive relationships in families
 - promote positive behaviour in children
 - build confidence in parenting.

Mode of delivery

Playgroup format in partnership with schools.

Delivery to Aboriginal and/or Torres Strait Islander families

Yes.

Evaluation

- » Level of evidence: process evaluation, including parent satisfaction survey (Abraham & Piers-Blundell 2012).
- » Effectiveness: emerging.



Evaluation outcomes

Parent satisfaction surveys in 2011 and 2012 showed that parents:

- » cared about their children’s education and development
- » understood that the program offered information on how to build strong foundations
- » felt more skilled and able to support their children’s learning and development.

A full evaluation of the FaFT program is currently underway.

Endorsements

NHMRC Level IV (CtGC); Listed (Knowledge Circle).

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Early learning interventions

It Takes Two to Talk: The Hanen Program for Parents

The It Takes Two to Talk program is designed specifically for parents of young children (birth to five years of age) who have been identified as having a language delay. In a small, personalised group setting parents learn practical strategies to help their children learn language naturally throughout their day together.

The program aims to increase children's social communication skills and language development by enhancing the quality of interaction between parent and child. Parents are taught that interaction should usually be initiated and controlled by the child. They are explicitly taught to follow the child's lead and respond in a way that reflects the child's immediate interests.

Targets

- » Audience: parents and children 0–5 with language delay.
- » Objectives: increase children's speech and language development; increase parental role in child interactions (Girolametto, Pearce & Weitzman 1996, 1997).

Mode of delivery

Group-based speech therapy; individual parent–child pairs. Designed to be delivered by a certified speech-language pathologist.

Delivery to Aboriginal and/or Torres Strait Islander families

No available research.

Evaluation

- » Level of evidence: RCT (Girolametto et al. 1988, 1992, 1994); pre- and post-test control group design with random assignment to immediate treatment condition or delayed treatment condition (Girolametto et al. 1996, 1997, 1998); pre- and post-test design with geographic assignment (Baxendale & Hesketh 2003); non-controlled trial; pre-mid-post follow-up (four months) (Pennington et al. 2009); pre- and post-intervention evaluation by parent report (Fong et al. 2012).
- » Effectiveness: emerging.



Evaluation outcomes

Girolametto et al. (1996) found that the program was effective in changing how parents interact with their children and that children's communication and language skills improved as a result. Mothers in the program were less directive and more responsive; used slower, less complex language with the child; and used target words more frequently. Children showed increased ability to interact and take turns; had larger vocabularies; had a greater variety of words in their vocabularies; used more multi-word sentences; used target words in a number of different contexts; and used more speech sounds.

Fong et al. (2012) found children with speech and language delays demonstrated improvement in post-program expressive vocabulary, with an increase in the median vocabulary age-equivalence of the child beyond that of the chronological time that had elapsed.

Endorsements

Emerging (PRC, 2013).

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Early learning interventions

Mobile Preschool Program

The Mobile Preschool Pilot Program is targeted at Aboriginal and Torres Strait Islander children and their communities. The pilot ran for two years between 2002 and 2004.

The program aims to develop and distribute kindergarten programs and materials to remote Indigenous communities that otherwise have no access to kindergarten infrastructure. Early childhood teachers prepare kits of materials and activities designed to stimulate and develop children's pre-literacy and pre-numeracy skills. The kits are stored in plastic boxes known as play-packs, each one with a theme. Teachers deliver the play-packs to the communities and introduce them to local teaching support officers, who are generally Aboriginal and Torres Strait Islander people nominated by their communities. The teaching support officers then run preschool sessions three to five mornings per week, often with the help of parents (Goos et al. 2007).

Targets

- » Audience: Aboriginal and Torres Strait Islander children and their communities.
- » Objectives:
 - increase enrolment, attendance and participation of Indigenous children in remote areas
 - prepare children for formal schooling through pre-literacy and pre-numeracy activities.

Mode of delivery

Delivered by early childhood teachers.

Delivery to Aboriginal and/or Torres Strait Islander families

Yes

Evaluation

- » Level of evidence: cohort comparison study (Nutton, Bell & Fraser 2013).
- » Effectiveness: emerging.



Evaluation outcomes

The main findings include:

- » children with 192 days or more of mobile preschool available were 6.5 times more likely to not be developmentally vulnerable on two or more Australian Early Development Index domains than children who had no or less than 192 days of mobile preschool available: OR 1 = 6.5 (95%CI: 2.76–15.58)
- » researchers observed a strong and significant effect when comparing children who attended the mobile preschool program frequently with those who did not; children attending 80 days or more of mobile preschool were 3.6 times more likely to not be developmentally vulnerable on two or more Australian Early Development Index domains than children who attended less than 80 days of mobile preschool: OR 3.6 (95%CI: 1.56–8.29)
- » there was a strong association between attendance and program quality; children who attended high-quality programs were 3.7 times more likely to have high attendance compared to children in low quality programs: OR = 3.7 (95%CI: 1.55–8.94) (Nutton, Bell & Fraser 2013).

Qualitative data were collected in the form of feedback from teachers, teaching support officers and parents. The data suggested that children improved their fine motor skills and made cognitive progress. At one site these changes were documented through the use of scrapbooks to keep records of pupils' progress. Parents also commented that on enrolment to primary school their children were more familiar with school-type routines than those who did not have any preschool training and thus made a smoother transition. The strong partnerships built at the development phase of the program are thought to be essential in ensuring community support for the program, which, in turn, is imperative for its success (Goos, Lowrie & Jolly 2007).

Endorsements

Recommended (Catalogue of Evidence).

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Positive parenting interventions

Triple P Positive Parenting Program

Including Indigenous Triple P.

The Triple P Positive Parenting Program is a behavioural family intervention designed to teach parents nonviolent child management techniques as an alternative to coercive parenting practices. The program provides parents with information about unrealistic or dysfunctional parent cognitions and helps them to understand their children's behaviours. The program focuses on improving parents' skills so they are capable of solving problems themselves. The parents in the program are taught self-monitoring, self-determination of goals, self-evaluation of performance and self-selection of change strategies.

The Indigenous adaptation of Triple P uses active skills training to help parents promote children's competence and development and manage their behaviours.

Targets

- » Audience: parents of children and adolescents.
- » Objectives:
 - promote the development, growth, health and social competencies of children and young people
 - promote the development of non-violent, protective and nurturing environments for children
 - promote the independence and health of families by enhancing parents' knowledge, skills and confidence
 - enhance the competence, resourcefulness and self-sufficiency of parents in raising their children
 - reduce the incidence of child abuse, mental illness, behavioural problems, delinquency and homelessness.

Mode of delivery

To groups of parents or to individual parents. Indigenous Triple P is delivered over eight sessions in a group of 10–12 people.

Delivery to Aboriginal and/or Torres Strait Islander families

Yes

Evaluation

- » Level of evidence: Indigenous Triple P: repeated measures randomised group design methodology, comparing the intervention with a waitlist control condition and pre- and post-intervention, with a six-month follow up of the intervention group.

Triple P: numerous RCTs, four meta-analyses and two population trials have demonstrated that Triple P has had a significant positive impact on the behavioural, emotional and developmental difficulties of participating children and young people, as well as benefiting their families and school communities. The program has been successfully replicated.

- » Effectiveness: well supported.



Evaluation outcomes

- » United States Population Study: positive effects in the Triple P System counties for rates of substantiated child maltreatment, child out-of-home placements, and hospitalisations or emergency room visits for child maltreatment injuries, compared to control counties.
- » Australia Population Study: the Triple P System was associated with significantly greater reductions in emotional problems and psychosocial distress in both children and their parents than in the care as usual condition. No intervention effects were found for conduct problems, hyperactivity and peer relationship difficulties.
- » Indigenous Triple P: parents attending Group Triple P reported a significant decrease in rates of problem child behaviour and less reliance on some dysfunctional parenting practices following the intervention in comparison to waitlist families. The program also led to greater movement from the clinical range to the non-clinic range for mean child behaviour scores on all measures. Effects were primarily maintained at six-month follow up. Qualitative data showed generally positive responses to the program resources, content and process. However, only a small number of waitlist families subsequently attended groups, signalling the importance of engaging families when they first make contact, helping families deal with competing demands and offering flexible service delivery so families can resume contact when circumstances permit (Turner, Richards & Sanders 2007).

Endorsements

Indigenous Group Triple P: NHMRC III-I (CtGC); Supported (PRC).

Triple P: Promising (Blueprints); Best practice (Building Blocks, 2012); Recommended (Catalogue of Evidence); Listed (Child Trends; SAMHSA); Near top tier (Coalition for Evidence-Based Policy); 4 star (KidsMatter); Well supported (PRC; *The Nest*); Promising (PPN).

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Positive parenting interventions

Parent Child Interaction Therapy

Parent Child Interaction Therapy (PCIT) is a program designed to decrease externalised child behaviour problems (such as defiance and aggression), increase positive parent behaviours and improve the quality of the parent–child relationship. The program involves child-directed interaction and parent-directed interaction, beginning with parental teaching followed by parent and child play sessions.

Targets

- » Audience: parents and children aged two to seven years referred from child protection authorities, identified as suspects of maltreatment and self-identified because of significant child behaviour problems or stress.
- » Objectives: the program aims to correct ineffective parenting styles (permissive parenting, authoritarian parenting and overly harsh parenting) and encourage an authoritative approach to parenting.

Mode of delivery

Parent education and training and therapy can be delivered in ambulatory health care settings (community or outpatient clinics). The intervention is designed to be delivered by child therapists, treatment researchers and therapy trainers at the masters or doctoral level.

Delivery to Aboriginal and/or Torres Strait Islander families

Unknown

Evaluation

- » Level of evidence:
 - international: numerous, including RCTs and other study designs
 - Australia: RCT (Thomas & Zimmer-Gembeck 2011).
- » Effectiveness: supported.



Evaluation outcomes

International: the numerous evaluations of PCIT come from a mix of designs, with the best using RCTs. These trials typically solicited families in which young children exhibited severe behavioural problems and then randomly assigned the subjects to the PCIT intervention group or a waitlist control group. Key outcome measures included parent self-reports of child behaviour and expert observations of interaction of parents and children in clinical settings. Some randomised trials focused instead on abusive parents. Parents who had been referred by child welfare agencies after reported abuse were randomised into intervention and waitlist control groups. The key outcome was a re-report of child abuse obtained from a centralised state database

The Kaufmann Best Practices Project (2004:8) identified PCIT as one of three intervention protocols in the field of child abuse treatment deemed ‘clear consensus choices as “best practices”’.

» Australia: the study found:

- after 12 weeks significant improvements were made on multiple measures relating to child behaviour and parental behaviours, based on parental report
- statistically significant improvements were made in parent reports of child problems, parent stress and parental behaviours, but teachers reported no significant improvement in child symptoms
- participants who completed the treatment program were significantly less likely to be notified to child protection compared to those participants who did not finish the treatment program.

Endorsements

Promising (Blueprints); Best practice (Building Blocks, 2014); Well supported (Catalogue of Evidence); Listed (Child Trends); Supported (PRC; *The Nest*); Listed (SAMHSA).

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Positive parenting interventions

Parents Under Pressure (PuP)

The PuP program aims to help parents facing difficult life circumstances to develop positive and secure relationships with their children. It uses a strengths-based approach to enhance parental understanding of child development, encourage parental emotional availability and improve parent–child interactions.

The program is aimed at improving family functioning and reducing child abuse in high-risk families with children from birth to eight years. The program was developed as an intensive home-based intervention. Based on attachment theory and incorporating the practice of mindfulness, the program aims to develop behavioural parenting skills—particularly emotional regulation.

Targets

- » Audience: families with children birth to eight years at high risk of child maltreatment, such as parental substance misuse.
- » Objectives:
 - improved parental functioning
 - improved child functioning
 - improved parent–child relationship.

Mode of delivery

The PuP program is delivered in the home and embedded within a wider case management framework. It is supported by a therapist manual and a parent workbook that provide an opportunity for the parent to work through guided exercises that cover a range of different topics. Critically, an individualised approach is taken with each family so that the program is tailored to the unique needs of every family. Ten modules are delivered over 10–12 weeks.

Delivery to Aboriginal and/or Torres Strait Islander families

Yes

Evaluation

- » Level of evidence:
 - Australian studies: pre- and post-test study (no control group) (Dawe et al. 2003); RCT (Dawe & Harnett 2007); pre and post study (no control group) (Dawe et al. 2008)
 - UK: RCT currently underway (Barlow et al. 2013).
- » Effectiveness: supported.



Evaluation outcomes

The effectiveness of the PuP program has been evaluated in three series of case studies; one with parents on methadone maintenance (Dawe et al. 2003), another with families referred by child protection services (Harnett & Dawe 2008) and finally for women leaving prison (Frye & Dawe 2008). A RCT (Dawe & Harnett 2007) compared the effectiveness of the home-delivered program with a clinic-based, brief parenting intervention and standard care in families on methadone maintenance. Substantial changes were found for families receiving PuP in all four reports. Of particular interest in the RCT was the finding that child abuse potential significantly decreased in families receiving PuP at six months follow up. The average age of the children in the study was four years, once again suggesting that targeting families with younger children may be associated with positive outcomes.

Endorsements

Best practice (Building Blocks, 2014); Supported (PRC, 2012; *The Nest*).

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Positive parenting interventions

Let's Start

The Let's Start project was a trial to implement the Exploring Together Preschool Program in the Northern Territory for Indigenous and other parents and children. The program is a ten-week multi-group (parent and child group, parent only group and child only group) early intervention program targeted towards Indigenous children aged three to seven years and their parents. The program aims to help close the gap on Indigenous disadvantage by improving the quality of parenting and early social-emotional learning of Indigenous children and assisting them in the transition to school.

Targets

- » Audience: children from four to six years old whose behaviour was a concern were referred to Let's Start by teachers or other practitioners or by family members.
- » Objectives:
 - build family knowledge of early learning through active engagement in quality early childhood education programs
 - strengthen knowledge of child development through engagement in early learning programs, home visits, family workshops or individual consultations
 - build awareness of health, hygiene and nutrition as contributing factors to developmental outcomes
 - strengthen positive relationships in families
 - promote positive behaviour in children
 - build confidence in parenting.

Mode of delivery

Trained group leaders facilitate the program, which is run over a single school term in a safe place such as a school or a childcare centre.

Delivery to Aboriginal and/or Torres Strait Islander families

Yes

Evaluation

- » Level of evidence:
 - Let's start: evaluation (Robinson et al. 2009)
 - Exploring Together Preschool Program: single RCT undertaken.
- » Effectiveness: promising.



Evaluation outcomes

Statistically significant improvements in problem behaviour among participating children at home and at school.

Direct observations by program staff suggest that there were reductions in anxiety on the part of the child, reductions in aversive parenting, improved reciprocal responsiveness between parent and child, and improved parental confidence or assertiveness. Further, single case analysis suggests that participation has led to improved parent–child relationships where these relationships have been damaged by separations or neglect, including fostering and out-of-home care. Group leaders have observed numerous cases of improvement or repair of relationships between parents and children who have been subject to welfare intervention.

There was a reduction in parental psychological distress, as evidenced by the Kessler 6 effect size (1.03).

Endorsements

Let's start: Promising (AIFS); Promising (Building Blocks, 2014); NHMRC Level III-2 (CtGC); Listed (Knowledge Circle); Emerging (PRC, 2012).

Exploring Together Preschool Program: Best Practice (Building Blocks, 2012); 3 star (KidsMatter).

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Positive parenting interventions

Family Wellbeing Program

The Family Wellbeing Program focuses on the empowerment and personal development of Indigenous people through sharing stories, discussing relationships and identifying goals for the future. Workshops are held with both adults and children to highlight the various health and social issues experienced by Indigenous communities and the steps that can be implemented to deal with these issues.

The empowerment program was initially designed to support adults to take greater control and responsibility for their decisions and lives. An adapted version has been developed for schools, using the program to enhance Indigenous young people's personal growth and development. The program was developed by, and is delivered by, Aboriginal people.

Targets

- » Audience: Aboriginal and Torres Strait Islander families with children from birth to school age.
- » Objectives:

The Family Wellbeing Project aims to build communication, problem-solving, conflict resolution and other life skills to enable the individual to take greater control and responsibility for family, work and community life.

Mode of delivery

Structured into four stages, each of which runs for ten weeks with one four-hour session per week. The course is nationally accredited and provides participants with formal qualifications in counselling (Tsey & Every 2000). Facilitated group or school-based delivery.

Delivery to Aboriginal and/or Torres Strait Islander families

Yes

Evaluation

- » Level of evidence: Evaluation using theory-driven analysis, participant observation, and analysis of participants' personal narratives (Tsey & Every 2000); thematic qualitative analysis (Tsey et al. 2010).
- » Effectiveness: emerging.



Evaluation outcomes

The evaluations to date have been limited to qualitative analysis. Tsey and Every (2000) found participation in the course led to high levels of personal empowerment. They note, ‘the course enhanced participants’ sense of self-worth, resilience, ability to reflect on root causes of problems and problem-solving ability, as well as belief in the mutability of the social environment’ (Tsey & Every 2000:509). Tsey et al. (2009) synthesised seven formative evaluation reports across four study settings in the Northern Territory and Queensland between 1998 and 2005. This synthesis found:

across the study site, the participants demonstrated enhanced capacity to exert greater control over factors shaping their health and wellbeing. Evident in the participants’ narratives was a heightened sense of Indigenous and spiritual identity, respect for self and others, enhanced parenting and capacity to deal with substance abuse and violence (Tsey et al. 2009).

McCalman et al. (2010) found the program ‘has helped participants to understand their situation and experiences and to move from self blame, victimhood and poor self esteem towards a position of greater strength and control’.

Endorsements

NHMRC Level IV (CtGC)

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Positive parenting interventions

Incredible Years

The Incredible Years is a parenting program that aims to promote children's emotional and social competence; and to prevent, reduce, and treat behavior and emotional problems in young children. It focuses on strengthening parenting competencies (monitoring, positive discipline, confidence) and is particularly concerned with facilitating positive connections between families and schools.

Targets

- » Audience: Parents of children aged 4-8
- » Objectives:
 - Improved parent-child interactions, building positive relationships and attachment, improved parental functioning, less harsh and more nurturing parenting, and increased parental social support and problem solving
 - Improved teacher-student relationships, proactive classroom management skills, and strengthened teacher-parent partnerships
 - Prevention, reduction, and treatment of early onset conduct behaviors and emotional problems
 - Promotion of child social competence, emotional regulation, positive attributions, academic readiness, and problem solving
 - Prevention of conduct disorders, academic underachievement, delinquency, violence, and drug abuse.

Mode of delivery

- » Parent groups are delivered in 12-20 weekly group sessions of 2-3 hours (specific length varies depending on which parent program is being implemented).
- » Group sessions focus on: strengthening parent-child interactions, nurturing relationships, reducing harsh discipline, and fostering parents' ability to promote children's social, emotional, and language development.
- » Preschool and School Age Parent groups encourage parents as they learn to promote school readiness skills.

Delivery to Aboriginal and Torres Strait Islander families

Yes

Evaluation

- » Level of evidence: Large scale RCT and multiple smaller RCTs and program evaluations
- » Effectiveness: well supported.



Evaluation outcomes

A meta-analysis of 50 studies found general positive outcomes for Incredible Years participants, including a mean effect size of $d = .27$ concerning disruptive child behavior. Initial severity of child behavior revealed to be the strongest predictor of intervention effects, with larger effects for studies including more severe cases. Findings indicate that the IYPT is successful in improving child behavior in a diverse range of families.

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Integrated service delivery

Best Start

Best Start offers a range of family-friendly services in nutrition and health education, early language and numeracy, and playgroups and integration into pre-primary school programs.

The program develops and delivers age-appropriate activities and promotes information sessions and projects to improve health, educational opportunities, and social and cultural development, such as language, nutrition and bush trips. Best Start also encourages parents to build on their strengths and share ideas and skills. All Best Start programs are owned and managed at the local Aboriginal community level.

Targets

- » Audience: Aboriginal and Torres Strait Islander families with children up to five years.
- » Objectives:
 - Better access to child and family support, health services and early education
 - Improvements in parents' capacity, confidence and enjoyment of family life
 - Communities that are more child and family friendly.

Mode of delivery

Delivered by Best Start Coordinators.

Delivery to Aboriginal and/or Torres Strait Islander families

Yes

Evaluation

- » Level of evidence: program evaluation (Gillam 2001).
- » Effectiveness: emerging.



Evaluation outcomes

An evaluation found positive impacts on health, social and learning outcomes and the development of parenting skills; the governance model was also identified as an effective example of coordinated service delivery (Building Blocks 2012). The program has been successfully replicated.

Endorsements

Best Practice (Building Blocks, 2012).

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Integrated service delivery

Whānau Ora

Whānau Ora is an inclusive inter-agency approach to providing health and social services to build the capacity of all New Zealand families, particularly Māori families. It approaches family wellbeing holistically, rather than focusing separately on individual family members and their problems. Whānau is a Māori word for extended family.

Targets

- » Audience: families, in particular Māori families.
- » Objectives: families are:
 - self-managing
 - living healthy lifestyles
 - participating fully in society
 - confidently participating in Māori culture
 - economically secure and successfully involved in wealth creation
 - cohesive, resilient and nurturing.

Mode of delivery

Jointly implemented by Te Puni Kōkiri and the Ministries of Social Development and Health. Whānau Ora is delivered across multiple services. Each family unit has a 'navigator' who works with them to identify their needs, develop a plan to address those needs, and broker their access to a range of health and social services.

Delivery to Aboriginal and/or Torres Strait Islander families

No

Evaluation

- » Level of evidence: information collection trial—first phase results (Te Puni Kokiri 2012). Three collectives administered satisfaction surveys to 50 families; seven collectives completed a report template about family results and service.
- » Effectiveness: Emerging.



Evaluation outcomes

The first phase results reported in June 2012 indicated families are actively engaged in Whānau Ora—with 333 family units, representing 1301 individuals accessing the services. Collectives identified that Whānau Ora services enhanced outcomes in the Key Result Areas, including around immunisation, early childhood education attendance, parenting programs, whānau relationships, employment, and *rangatahi* school attendance and achievement. Service satisfaction survey results indicate progress around aspects of *whānau*-centred service delivery: 98% of *whānau* respondents agreed/strongly agreed that staff members respected their cultural beliefs and preferences; 100% agreed/strongly agreed that staff members helped their family to identify their needs; and 84% agreed/strongly agreed that they have developed new skills to achieve goals.

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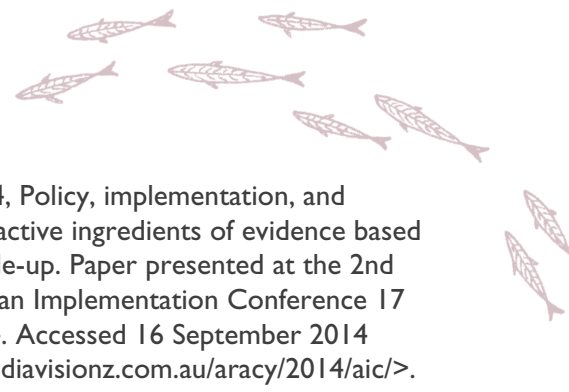
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Appendix: Endorsements

A number of reputable agencies provide lists of programs that have demonstrated effectiveness through research. These agencies provide a valuable resource in compiling and assessing the research evidence for listed programs. The table in this appendix provides descriptions of these agencies and shows the programs they endorse.

AIFS Promising Practice Profiles (now archived)

www.aifs.gov.au/institute/cafcapppp/ppp/index.html

HIPPY

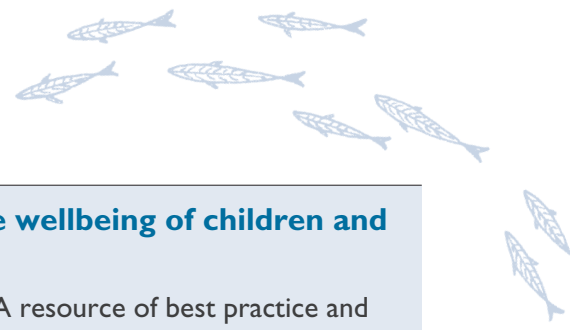
Let's Start Exploring Together

Blueprints for Healthy Youth Development

www.blueprintsprograms.com

The identification by Blueprints of a model or promising program is based upon an initial review by the Center for the Study and Prevention of Violence at the Institute of Behavioral Science, University of Colorado Boulder, of a program's evaluation evidence and a final review and recommendation by a distinguished Advisory Board of six experts in the field of positive youth development. More than 1250 programs have been reviewed, but only a small portion are designated as model or promising programs based on their ability to effectively improve developmental outcomes in the areas of behaviour, education, emotional wellbeing, health and positive relationships.

HighScope Preschool	Promising
Nurse-Family Partnership	Model program
Parent Child Interaction Therapy	Promising
Triple P	Promising



Building Blocks: Best practice programs that improve the wellbeing of children and young people

Developed by the Commissioner for Children and Young People WA. A resource of best practice and promising programs that have been shown to—or have strong potential to—improve the wellbeing of Western Australian children and young people. Edition One of Building Blocks was tabled in the Parliament of Western Australia in February 2012 and contains 82 best practice and promising programs (Commissioner for Children and Young People WA 2012). Edition Two identifies a further 44 programs (22 best practice and 22 promising) from across Australia (Commissioner for Children and Young People WA 2014).

2012	Maternal and Child Health Program, Townsville Aboriginal and Islander Health Service (Mums and Babies)	Best Practice
	HIPPY	Best Practice
	Triple P	Best Practice
	Exploring Together Preschool Program	Best Practice
2014	Strong Women, Strong Babies, Strong Culture	Promising
	Parents Under Pressure	Best Practice
	3A Project (Abecedarian Approach Australia)	Promising
	Parent Child Interaction Therapy	Best Practice
	Australian Nurse-Family Partnership	Promising
	Let's Start Exploring Together	Promising

Catalogue of Evidence, Department of Education and Early Childhood Development, Victoria

www.education.vic.gov.au/about/research/Pages/catevidence.aspx

The catalogue of evidence-based interventions is an online tool containing programs and recommended strategies to improve outcomes for children and young people. It is organised around key indicators, each with up to four recommended strategies that can be implemented and adapted to local needs.

Australian Nurse-Family Partnership Program	Recommended
HIPPY	Recommended
Maternal Early Childhood Sustained Home-Visiting	Recommended
Mobile Preschool Program	Kindergarten
Mums and Babies program	Low birth weight; Maternal and Child Health Services
Parents as Teachers	Reading, writing and numeracy
Parent Child Interaction Therapy	Child protection
Strong Women, Strong Babies, Strong Culture	Maternal and child health services;
Triple P 	Child protection; parenting support

Child Trends

www.childtrends.org

Child Trends is a non-profit, non-partisan research centre based in Maryland in the United States. The Child Trends What Works/Lifecourse Interventions to Nurture Kids Successfully (LINKS) database is a searchable register of more than 650 programs that have had at least one randomised, 'intent to treat' evaluation that assessed child or youth outcomes related to education, life skills, and social/emotional, mental, physical, behavioural, or reproductive health.

HighScope Perry Preschool

Nurse-Family Partnership

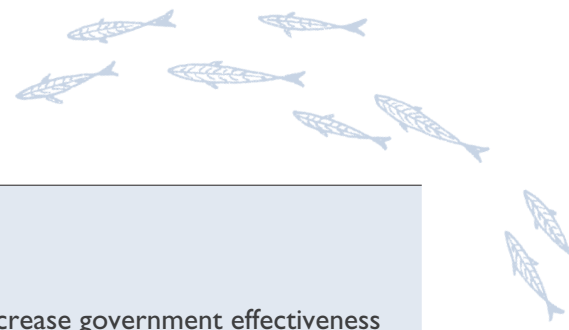
Triple P Positive Parenting Program

Parents as Teachers

HIPPY

Parent Child Interaction Therapy

Carolina Abecedarian Project



Coalition for Evidence-Based Policy

<http://evidencebasedprograms.org/about/full-list-of-programs>

The Coalition is a non-profit, non-partisan organisation that seeks to increase government effectiveness through the use of rigorous evidence about what works. The Coalition advocates many types of research to identify the most promising social interventions, noting, however, that evidence of effectiveness generally ‘cannot be considered definitive without ultimate confirmation in well-conducted randomised controlled trials’.

Nurse-Family Partnership	Top Tier
Triple P	Near Top Tier
Abecedarian Project	Promising
(HighScope) Perry Preschool Project	Promising

CtGC (Closing the Gap Clearinghouse), Review of Early Childhood Parenting, Education and Health Intervention Programs for Indigenous Children and Families in Australia (Bowes & Grace 2014)

This paper provides a review of prevention and early intervention literature focused on improving outcomes for Australian Indigenous children in the early childhood years. Thirteen programs are identified and assessed for quality of research design according to National Health and Medical Research Council levels of evidence.

HIPPY	Level III-2
Let’s Start Exploring Together	Level III-2
Parents as Teachers	Level IV
Indigenous Group Triple P	Level III-1
Families as First Teachers	Level IV
Strong Women, Strong Babies, Strong Culture	Level IV; III-2
Mums and Babies program	Level III-2

Herceg, Improving Health in Aboriginal and Torres Strait Islander Mothers, Babies and Young Children: A Literature Review (Herceg 2005)

This report identifies interventions that have been shown to improve antenatal health outcomes or intermediate health measures for Aboriginal and Torres Strait Islander women and for children aged 0–5.

The Mums & Babies program	Successful
Strong Women, Strong Babies, Strong Culture	Successful

HomVEE—Home Visiting Evidence of Effectiveness (United States Department of Health & Human Services)

<http://homvee.acf.hhs.gov>

HomVEE reviews the evidence of effectiveness for specific home visiting program models according to departmental criteria for evidence-based program models.

HIPPY	Effective
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MECSH	Effective
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Nurse-Family Partnership	Effective
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Parents as Teachers	Effective
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KidsMatter

www.kidsmatter.edu.au

Each program that appears in the guide has been reviewed and summarised by the KidsMatter team using information and materials supplied by the program's author(s).

Exploring Together Preschool Program	3 stars
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Triple P	4 stars
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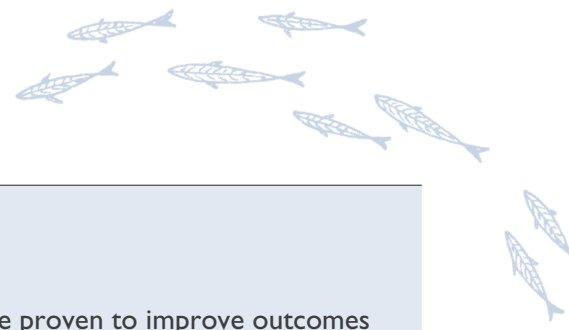
Knowledge Circle Practice Profiles

<https://apps.aifs.gov.au/ipppregister>

Knowledge Circle, an initiative of the Australian Institute of Family Studies, collects information from service providers and agencies that are dedicated to keeping Aboriginal and Torres Strait Islander children safe and happy in their families and communities. The profiles provide a snapshot of culturally appropriate approaches that have been shown to work or show great promise in delivering positive outcomes to children and families.

Families as First Teachers	Listed
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Let's Start—Parent Child Program	Listed
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PPN (Promising Practices Network)

www.promisingpractices.net/programs.asp

The PPN website features summaries of programs and practices that are proven to improve outcomes for children. All programs have been reviewed for quality and to ensure that they have evidence of positive effects. Programs are assigned to one of three evidence level categories (Proven, Promising or Other Reviewed Programs) according to a number of evidence criteria. Due to funding constraints, the PPN project has concluded. The PPN website was archived in June 2014 and has not been updated since then.

Triple P	Promising
The Abecedarian Project	Proven
Parents as Teachers	Promising
Nurse-Family Partnership	Proven
HighScope Perry Preschool	Proven
HIPPY	Reviewed

PRC (Parenting Research Centre), Evidence Review: An Analysis of the Evidence for Parenting Interventions for Parents of Vulnerable Children Aged up to Six Years (PRC 2013)

Nurse-Family Partnership	Well supported
Parent Child Interaction Therapy	Supported
Triple P	Supported
Parents Under Pressure	Emerging

Evidence Review: An Analysis of the Evidence for Parenting Interventions in Australia (PRC 2012)

Triple P	Well supported
Indigenous Group Triple P	Supported
Parent Child Interaction Therapy	Supported
Parents Under Pressure	Supported
HIPPY	Promising
MECSH	Promising
It Takes Two To Talk	Emerging
Let's Start Exploring Together	Emerging

SAMHSA—National Registry of Evidence-based Programs and Practices (NREPP)

www.nrepp.samhsa.gov

NREPP is a searchable online registry of more than 330 substance abuse and mental health interventions. NREPP was developed to help the public learn more about evidence-based interventions that are available for implementation. NREPP does not endorse or approve interventions.

HighScope Curriculum

Nurse-Family Partnership

Parent Child Interaction Therapy

Parents as Teachers

Triple P

The Nest action agenda evidence matrix

www.whatworksforkids.org.au

ARACY is in the process of developing the Nest What Works for Kids database of supported programs to improve child and youth wellbeing. Programs are assessed using the rating scheme from the PRC (2012) evidence review of effective parenting interventions in Australia.

Best Start (Western Australia)	Promising
Carolina Abecedarian	Well supported
HighScope Perry Preschool	Supported
HIPPY	Promising
Nurse-Family Partnership	Well supported
Parent Child Interaction Therapy	Supported
Parents Under Pressure	Supported
Parents as Teachers	Well supported
Strong Women, Strong Babies, Strong Culture	Promising
Triple P	Well supported



the
Lowitja
Institute

Australia's National Institute for Aboriginal and
Torres Strait Islander Health Research

The Lowitja Institute
PO Box 650, Carlton South
Victoria 3053 AUSTRALIA

T: +61 3 8341 5555
F: +61 3 8341 5599
E: admin@lowitja.org.au
W: www.lowitja.org.au