minderoo

Response to the draft report of the Productivity Commission's inquiry into child care and early childhood learning

MINDEROO FOUNDATION

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About Minderoo Foundation

Andrew and Nicola Forrest founded the Minderoo Foundation in 2001, one of Australia's largest philanthropic organisations. Nicola and Andrew's community development work is driven by the motto "give a man a fish and you feed him for a day. Teach a man to fish and you feed him for life".

To date over $330 million has been committed through the Foundation to charitable causes across Australia and internationally. In addition Andrew and Nicola founded and run GenerationOne and the Walk Free Foundation.

GenerationOne is a national program focused on ending Indigenous disparity in Australia through employment and Walk Free Foundation, is a global initiative focused on ending modern slavery and people trafficking.

In February 2013, Nicola and Andrew became the first Australian signatories to the Bill and Melinda Gates' Giving Pledge. The Giving Pledge is a commitment by the world's most influential individuals and families to dedicate the majority of their wealth to philanthropy.

The original aim of the Minderoo Foundation was to help less fortunate Australians, particularly children and Indigenous Australians, to aspire and achieve beyond their current circumstances and expectations.

In more recent times, the Foundation has turned its attention more closely to the issue of early childhood development and the importance of brain development in the first three years of a child's life.

This belief was encapsulated in the recently released *Creating Parity Review* which Prime Minister Tony Abbott commissioned Andrew Forrest to undertake. The Review can be accessed here.

The first chapter of the Review covers the importance of early childhood and in particular, the need to focus on integrated service delivery in the first three years of a child's life. The full chapter is attached as Appendix 1 of this submission. The Review calls on the government to:

"*Work jointly to agree on, and put into effect within 12 months, a new approach that includes progressive investment to implement integrated early childhood services and to dramatically improve attendance. This new approach should start with schools in the 200 communities that have the highest level of vulnerability and need (as determined by the Australian Early Development Index's results). If implemented successfully along the lines of existing proven models, governments can consider further roll outs.*

In order for young children to be school-ready when they enter formal schooling governments will need to work jointly to coordinate and deliver intensive prenatal and holistic preventative early childhood services in target communities.

The implementation steps for delivering integrated services for prenatal and 0- to 3-year-olds must include:

1.1 co-locating and coordinating health, nutrition and other support services within schools or community hubs with outreach to schools with a single-point for accountability outcomes.

1.2 providing schools with support to build principal and teacher capacity to collaborate, engage with parents and external service providers, and to diagnose the needs of the school community and deliver services that are responsive to local context, culture, priorities and needs with accountability to a service standard

1.3 providing ready access to specialist services with the sharing of information between government agencies including health, community, child protection and education services to enable effective case management of vulnerable children and their families and optimise electronic health records

1.4 converting the Newborn Supplement into an incentive for women to identify their pregnancy as early as possible and be connected with a community nurse/case manager to coordinate prenatal care and access to the services listed above. The community nurse or case manager should work with a significant Elder to coordinate regular home visits to pregnant mothers, identify and intervene in behaviours which could harm the unborn child, and link the pregnant woman into community-based mother–child support groups. This approach is especially important for pregnant women in remote communities

1.5 providing comprehensive case management for vulnerable children from 0 to 3 years of age and their families to allow for early detection of, and intervention in, developmental delays, and provide a compulsory, structured explicit instruction programmes for three-year-olds led by an early childhood professional

1.6 extending the School Enrolment and Attendance Measure (SEAM) and Remote School Attendance Strategy (RSAS) programmes to each of the 200 sites, noting that the proposed case management approach would replace SEAM social workers (subject to recommendation 1.1 and 1.3)

1.7 driving accountability with compliance against service standards and aggregate data of children's development and improvement over time to be published on the Creating Parity website."

Creating Parity – The Forrest Review, August 2014

Minderoo believes that as a nation, we must shift resources and focus to prevention and early intervention rather than treating the outcomes of early childhood disadvantage that manifest throughout life.

The importance of early childhood education and development

Early childhood development sets the foundation for learning, behaviour and health, and helps build social capital and equality, all of which are crucial for the social and economic wellbeing of the nation.

- It is acknowledged globally that the first three years of a child's life are the most formative.
- The brain undergoes 90% of its growth during this time.
- For every dollar invested in effective early childhood development, there is a $7 return to society.
- Australia ranks 34 out of 37 countries in the Organisation for Economic Co-Operation and Development (OECD) for the percentage of three year olds in early childhood education – 18% in 2012 compared to the OECD average of 70%.
- In Australia only 0.1% of GDP is spent on pre-primary education, compared to 0.8% or more in countries such as Chile and Denmark.
- On average in OECD countries most spending on early childhood comes from public funding: 81% versus 19% from private funding.
- In Australia private expenditure exceeds public on early childhood institutions: 55% coming from private and only 45% from public funding.
- The gap between low and high performing students in Australia is far greater than many other Organisation for Economic Co-operation and Development countries (Program for International Student Assessment, 2009)
- 40% of the Australian workforce is below the minimum literacy and numeracy standard needed to function in a knowledge economy (Australian Industry Group, 2013)
- The academic performance of Australian students has declined at all levels of achievement over the past decade (Gonski Review, 2012)

As a nation, we have a social responsibility to help disadvantaged children and their families gain access to the early childhood resources they need for effective early childhood development.

The returns to the nation will be significant in terms of future savings to the social services, education, health and juvenile justice budgets and through addressing the root causes of many of the problems while improving social and economic outcomes.

Minderoo Foundation commends the Productivity Commission for focusing on the importance of early childhood education and development.

Further Minderoo believes the Commission's attention on the issue of integrated early childhood services is essential to achieving cost effective and successful outcomes for our most at-risk children.

Whole of government approach to early childhood education and development

DRAFT RECOMMENDATION 5.2
Governments should plan for greater use of integrated ECEC and childhood services in disadvantaged communities to help identify children with additional needs (particularly at risk and developmentally vulnerable children) and ensure that the necessary support services, such as health, family support and any additional early learning and development programs, are available.

Minderoo Foundation supports *Draft Recommendation 5.2.*

Current approaches to early childhood are fragmented and implemented in an ad hoc manner. Nationwide implementation must be targeted to those children most at-risk, evidence-based and measured in a robust and consistent manner.

The current concern around the Aboriginal Child and Family Centres (CFCs) and their impending 'defunding' illustrates this. A long-term strategy for the implementation and funding of early childhood development programs should be agreed between the Commonwealth and the States so these programs do not depend on the exigencies of the budget. Early childhood development programs should be seen as integral to the social policy framework as are school education and health services.

Further, models such as the Challis Early Learning and Parenting Centre in Armadale, Western Australia provide an example of how such programs can be implemented.

Evidence-based approach to early childhood education and development

DRAFT RECOMMENDATION 5.4
Early intervention programs to address the development needs of children from disadvantaged backgrounds should be underpinned by research. Their impact on the development outcomes of the children attending should be subject to ongoing monitoring and evaluation, including through the use of longitudinal studies.

Minderoo Foundations supports *Draft Recommendation 5.4.*

We must look to existing evidence when implementing early childhood programs. Efforts and resources are wasted through operation of programs that 'seem to work' rather than a reliance of what the evidence says. The Telethon Kids Institute and the Centre for Community Child Health at The Royal Children's Hospital Melbourne, for example, have conducted significant pieces of research that should inform policy and implementation decisions.

Commitment must be made to robustly measure early childhood development outcomes against an overarching framework in the Australian setting. The development of a set of small, but robust indicators will set a national benchmark for early childhood success and enable efforts to be measured against a common goal. Further we must be prepared to respond to what is and is not working and be prepared to allocate resources to interventions that are effective.

Accountability for results

DRAFT RECOMMENDATION 13.2

The Australian Government should establish a program to link information for each child from the National ECEC Collection to information from the Child Care Management System, the Australian Early Development Index, and NAPLAN testing results to establish a longitudinal database.

Subject to appropriate data protection methods, this information should be made available for research, policy analysis and policy development purposes. The ability of researchers to access unit record information should be permitted subject to stringent privacy and data protection requirements.

The Australian Government agency, which is the custodian of the Child Care Management System, should provide a de-confidentialised extract from the database each year that interested parties can use for research and planning purposes.

Minderoo supports *Draft Recommendation 13.2.*

We must be aware and accountable for the outcomes of individual children when investing to lift outcomes of those who are significantly disadvantaged. Further we must take a holistic approach to the development needs and outcomes of children, rather than treating health and education in isolation. A whole of Government approach is needed to ensure that no child falls through the cracks and that must start with consolidating and sharing information across sectors.

Integrated early childhood and parent support services

INFORMATION REQUEST 8.2

The Commission is seeking feedback on the role that integrated services can play in making ECEC more accessible for families. In particular, the Commission is interested in:

- *the extent to which integrating ECEC services with other family services and schools will deliver benefits to families and/or ECEC providers, and in particular, Indigenous and potentially other disadvantaged communities*
- *views on the best way to fund integrated services that provide ECEC, including whether child-based funding would be an appropriate funding model*
- *how funding could be apportioned across activities operating within an integrated service, including for the coordination of services, the management of administrative data and an evaluation of outcomes.*

The Review of the Sure Start program developed by the British Government (www.surestart.gov.uk) found that the provision of a comprehensive community based program of early intervention and family support which built on existing services could have positive and persistent effects, not only on child and family development but also help break the cycle of social exclusion and lead to significant long-term gain the Exchequer. The present day costs need to be understood as providing long-term savings to the national budget and as an investment in future productive capacity

The Challis Early Learning and Parenting Centre[1]

Minderoo Foundation has been contributing funding for an integrated early childhood and parental engagement service in Armadale, a low socio-economic community in Western Australia since 2012.

Following years of poor and declining academic, health and social outcomes by students at the Challis Lower Primary School, a suite of services was assembled and has been delivered on the school site since 2009. This program is known as the Challis Early Learning and Parenting Centre (CELPC).

The Principal of Challis Lower Primary School recognised that families were not accessing simple and essential services that could identify and address developmental delays, health or education issues in pre-school children. By the time many children commenced formal education at age 4 (Pre-Primary) undiagnosed issues were already impacting on the child's life.

"While Challis is a comprehensive approach, its potency is that it is low-cost. Rather than attempting to solve problems of early disadvantage via heavily layered, costly sequencing of multi-agency 'top-up' interventions which can end with duplication, inefficiency and 'intervention fatigue' among families, it seeks a lighter more effective and efficient touch. It does this by targeting long- term, cumulative actions commencing soon after birth and extending through the primary years.

This 'lighter touch' ensures more children start school 'ready to learn', where their subsequent educational pathways are supported by highly effective, efficient and systematically applied teaching methods. At the same time, children are supported by higher levels of parental engagement and commitment to education and by a community more focussed on achieving specific, ambitious end-point educational goals."

A Pathway from Early Childhood Disadvantage for Australian Children, April 2014, Telethon Kids Institute

By assembling existing services on the school site, Challis families were able to access a number of services in one location. This simple co-location and integration alone resulted in increased access by vulnerable families to essential services. For example (and anecdotally) engagement with the Child Health Nurse increased considerably because parents did not need to travel far and felt comfortable on the school site. Home visits were also co-ordinated through the school allowing a more efficient use of existing resources and a sharing of information across all services.

[1] In 2014 the Minderoo Foundation commissioned the Telethon Kids Institute to complete an assessment of the Challis model. The report includes detailed review of the Challis model, an overview of its development, the services it provides and the evidence supporting it. The case study will be publicly launched by Minderoo Foundation on 30 October 2014.

Results

The success of Challis demonstrates that major improvements in children's development can be achieved within a few short years if comprehensive case management with a range of essential services occurs effectively.

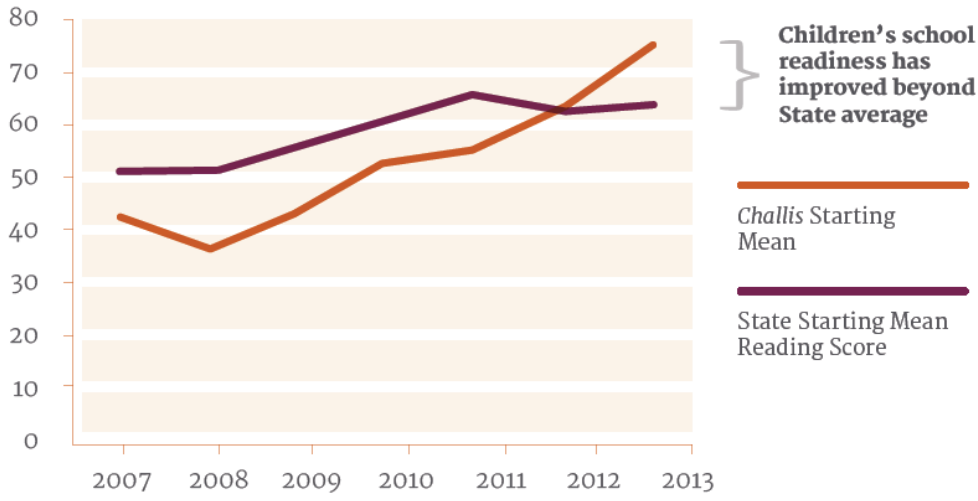
Data drawn from the Australian Early Development Census (AEDC) and Performance Indicators in Primary School (PIPS: administered by the University of Western Australia) demonstrated clear and significant improvement in the outcomes of children who went through the CELPC.

- According to the 2005 AEDC approximately 40% of students in the Armadale area (including Challis) had one-or-more areas of developmental vulnerability, with 20% of students vulnerable in the language and cognitive domains.
- By 2008, the picture was even worse, with 46% of children across the Armadale area showing signs of developmental vulnerability.
- Following implementation of the Challis model, in 2012 the picture for children entering Pre-Primary at the school had dramatically changed. AEDC results indicated a 40% reduction in the prevalence of vulnerability, with 28% of children entering Pre-Primary developmentally vulnerable in one or more domains.
- Of particular significance was the improvement in the language and cognition domain from having one-in-four children scoring in the lowest percentile in 2009 to only one-in-ten by 2012.
- PIPS data relating to Challis over the period immediately prior to, and following introduction of, the new model reflect a profound local improvement. In fact, those receiving a 'from-birth, full-dose' of Challis (children in Pre-Primary in 2013) perform at 'better-than-state' average. (refer to graph 1 and 2)

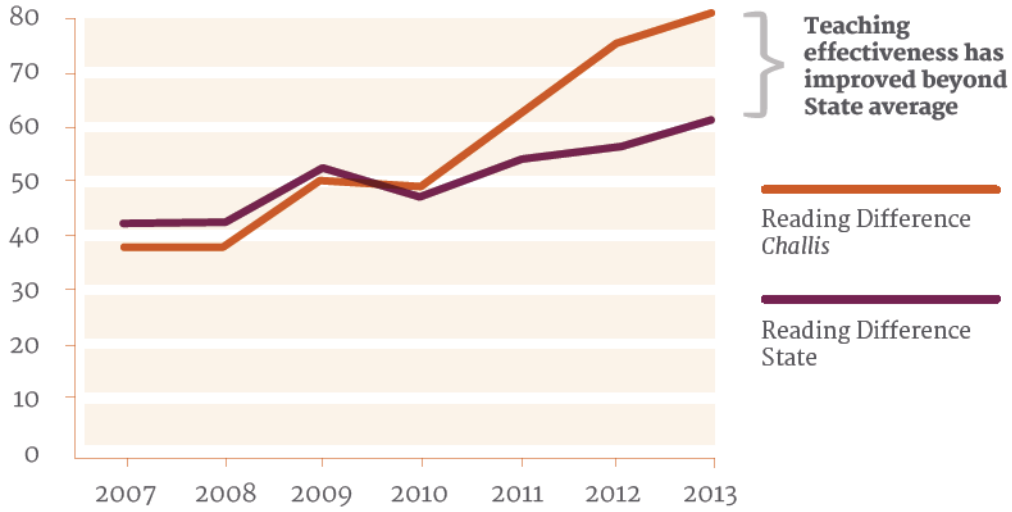
  A Pathway from Early Childhood Disadvantage for Australian Children, April 2014, Telethon Kids Institute

Thus, Challis is ensuring children start school ready to learn and on a trajectory for life long success.

Graph 1: School Readiness Improvement – Literacy Indicator *Challis* vs State 2007 – 2013



Graph 2: Teaching Effectiveness Improvement
***Challis* vs State 2007 – 2013**



Criteria for success

International learning and the CELPC demonstrate that a one size fits all approach cannot be applied to integrated early childhood services. However the evidence supports a common framework of five necessary elements for a program to be effective:

1. Engagement from (preferably before) birth with mothers and families
2. Early diagnosis of developmental issues and immediate access to specialist services
3. Highly structured, explicit instruction from age 3 (not play based activities)
4. Holistic case management of a child
5. Strong school leadership and instructional capacity

In order to meet these essential components, the CEPLC provides services such as:

- Family Support Worker
- Child Health Nurse and clinic
- Occupational Therapy
- Speech Pathology
- Immunisation Clinic
- Psychologist
- Parenting groups
- Pre-Kindergarten Program (three year olds)
- After school programs
- School car for transport support

The programs and services delivered at integrated sites should be responsive to the needs of the children and local community and may differ on each site.

The early childhood focus of primary schools and their community settings make them an ideal location for integrated service delivery. Primary schools are easily accessible, are well resourced with play and learning spaces and build a routine of school as a critical part of a child's development. Other community facilities may provide potential options for integrated service delivery; however there must be connection with the local school to ensure a child is linked into an ongoing pathway of education.

Funding

The CEPLC experience demonstrates that an integrated service delivery model does not rely on significant 'new' money, as many of the services currently exist in the same locality. Federal, State and Local Governments should work together to reallocate existing services and staff into an integrated service delivery site on school grounds. School leadership must be supported to 'diagnose' the needs of its community and locate resources to meet these needs.

The Challis model demonstrates how vital partnerships must be formed with organisations such as tertiary institutions, whose Allied Health students are required to complete a practical placement as part of their study. Challis has formed such a partnership with Curtin University.

At present, the Challis Principal has drawn on funding and resources from the following stakeholders:

- Department of Education, Western Australia
- Department of Health, Western Australia
- Disability Services Commission, Western Australia
- Non-government agencies (such as Parkerville Children and Youth Care Psychologist)
- 'Pro bono' from fourth year Curtin University Speech Pathology and Occupational Therapy students

Gap funding is provided by Minderoo Foundation at a budget of approximately $350,000 per annum to fund the following staff:

CPELC - Co-Ordinator	0.50 FTE
Teacher Pre-Kindergarten (age 3)	1.00 FTE
Ministerial Assistant	0.60 FTE
Education Assistant	0.90 FTE
Special Needs Liaison Officer	1.00 FTE
Education Assistant	0.40 FTE
Education Assistant	0.60 FTE

Measurement

While there are pockets of success in integrated early service delivery around Australia, there is no agreed outcome measurement framework to collect data and evaluate progress. This means the impact of effective practice is diluted against programs and philosophies that either do not address the importance of early investment or do so in an ineffective manner.

We are only able to become aware of potential failure when a child performs poorly in AEDC or NAPLAN in Grade 3. By this time, it is very expensive and difficult to reverse the impact of poor early childhood development which manifests itself in poor literacy and numeracy, and a lack of cognitive and social skills.

Minderoo Foundation supports any move towards developing an overarching early childhood outcomes framework in the Australian setting. The development of a set of small, but robust indicators will set a national benchmark for early childhood success and enable efforts to be measured against a common goal.

Key points

- It is acknowledged globally that the first three years of a child's life are the most formative. The brain undergoes 90% of its growth during this time.
- For every dollar invested in effective early childhood development, there is a $7 return to society.
- Integrated early childhood service delivery is recognised as one of the most cost effective ways to lift outcomes of disadvantaged children.
- An effective integrated program must include five key components:

1. Engagement from (preferably before) birth with mothers and families
2. Early diagnosis of developmental issues and immediate access to specialist services
3. Highly structured, explicit instruction from age 3 (not play based activities)
4. Holistic case management of a child
5. Strong school leadership and instructional capacity

- We must rely on evidence and best practice to guide a wider implementation of integrated early childhood services.
- Our efforts must be measured against a common goal using standardised indicators of success.
- As a nation, we must shift to a model of prevention and early intervention before school age rather than treating the symptoms of poor early childhood development and education at a later date when programs are more expensive, and less effective and the likelihood of success diminishes along with the years.

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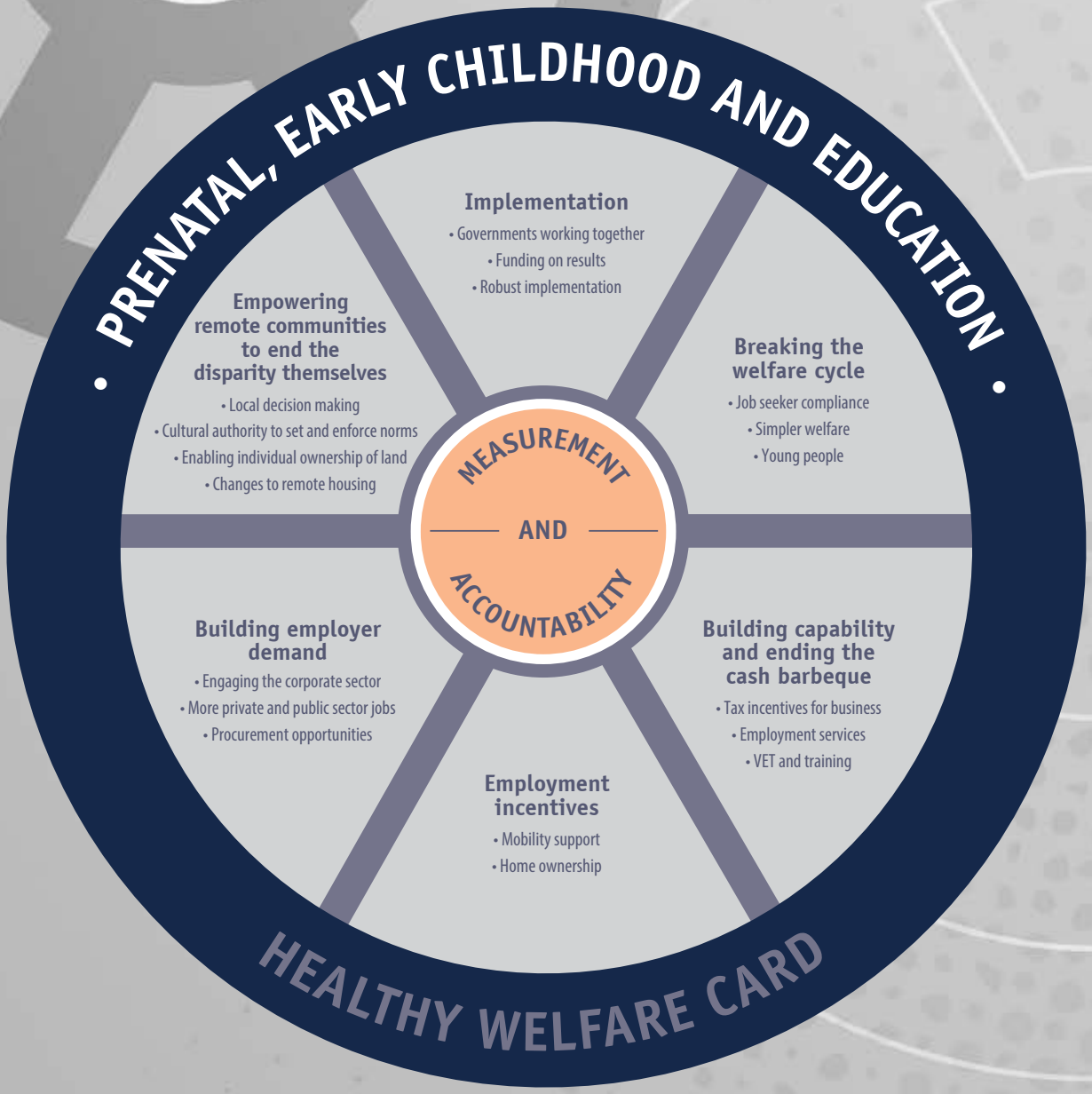
Appendix 1: The Forrest Review – Creating Parity, Chapter 1: Prenatal, early childhood and education

Chapter 1: Prenatal, early childhood and education



What success looks like

There is parity between first Australian and Australian prenatal and infant health, early education and education outcomes.

Prenatal

- Foetal alcohol spectrum disorder is a historical regret and is no longer apparent in the nation's births.
- Expectant mothers have a healthy diet and don't drink or smoke and regularly visit professionals for prenatal care.
- Babies are born healthy and equal to the challenge of life.

Early childhood

- Children are enrolled at school from birth and get the rest, diet and environment to thrive and grow into healthy young people.
- Parents are active and informed, able to read to their children in English and have the child's grandparents active in their mentoring role.
- Children get the medical attention they need when they need it and go to school at least nine out of 10 days.
- Families and communities reinforce the standards required for excellent early childhood, school attendance and a healthy environment for children.

Education

- Truancy is rare and family payments reinforce this.
- Schools with the greatest needs have the resources—such as the best teachers—that will achieve parity in education for their students.
- Children from remote communities get a decent education and have the support they need, including, where required, access to boarding school.
- First Australian students complete Year 12 and university entrance on par with other students.

There are two elements that are critical in binding these reforms together into an integrated reform package and both are critical to the reform process. As described in the executive summary, they will act like the iron bands that hold the frame of a wagon wheel together:

- the focus on prenatal, early childhood development and education
- the introduction of the new Healthy Welfare Card.

There is employment parity now for first Australians with Certificate III or IV level training that most apprentices undergo, diploma or university qualifications. To remove the disparity we must get growth and development from conception to three years old right, so that children excel at school and further training and succeed in the workplace. As it will take around two decades for these children to reach working age, we must have the interim intensive services described in the rest of this report for those who are already of school and working age.

Before we can address education, we need to get children into school. Education experts have reported that children need a school attendance record of at least 80%, for schooling to be effective. In the Northern Territory's very remote areas of (where 57% of students in the Territory are educated, or 8,253 students), only one in five children is attending school more than 80% or the time. The average first Australian attendance rate in very remote Northern Territory schools is about 58%, compared with almost 83% in provincial areas. The Commonwealth Government's School Attendance and Enrolment Measure and the recent Remote Schools Attendance Strategy and other measures have helped where they are in place. Much more needs to be done to ensure children go to school every day.

A key theme from all of the consultations was the strong support to nurture children to succeed in education and their future careers. Getting a job and finishing school makes sense when it is part of making a future for your children.

International and local research, practice and experience have proven that the time from conception to three years of age is the most formative in any individual's life. One of the greatest, if not the greatest tragedy of first Australians disparity and indeed all disadvantaged children, is the irreversible impact of poor care on an unborn child.

Unexpected pregnancies and rampant peer group pressure on young adults to participate in regular and excessive drug and alcohol consumption, particularly in remote first Australian communities, has significant and detrimental impacts on a developing foetus, not to mention the impact on a young mother unprepared for parenthood. However, even less severe lifestyle impacts, such as poor nutrition, have been proven to have lifelong effects on a child. It is critical for young and newly expectant mothers to have antenatal check-ups and understand how they can best nurture their babies during pregnancy.

> A healthy pregnancy is crucial to the early stages of a child's life. Tragically, alcohol and drug consumption during pregnancy does occur—quite often out of ignorance. Foetal alcohol spectrum disorder is a significant issue and we should be on the constant lookout to prevent it. Parenting programs for Aboriginal women and men must be a priority, and health services must be able to step in to assist young mums and dads and their unborn child.[42]

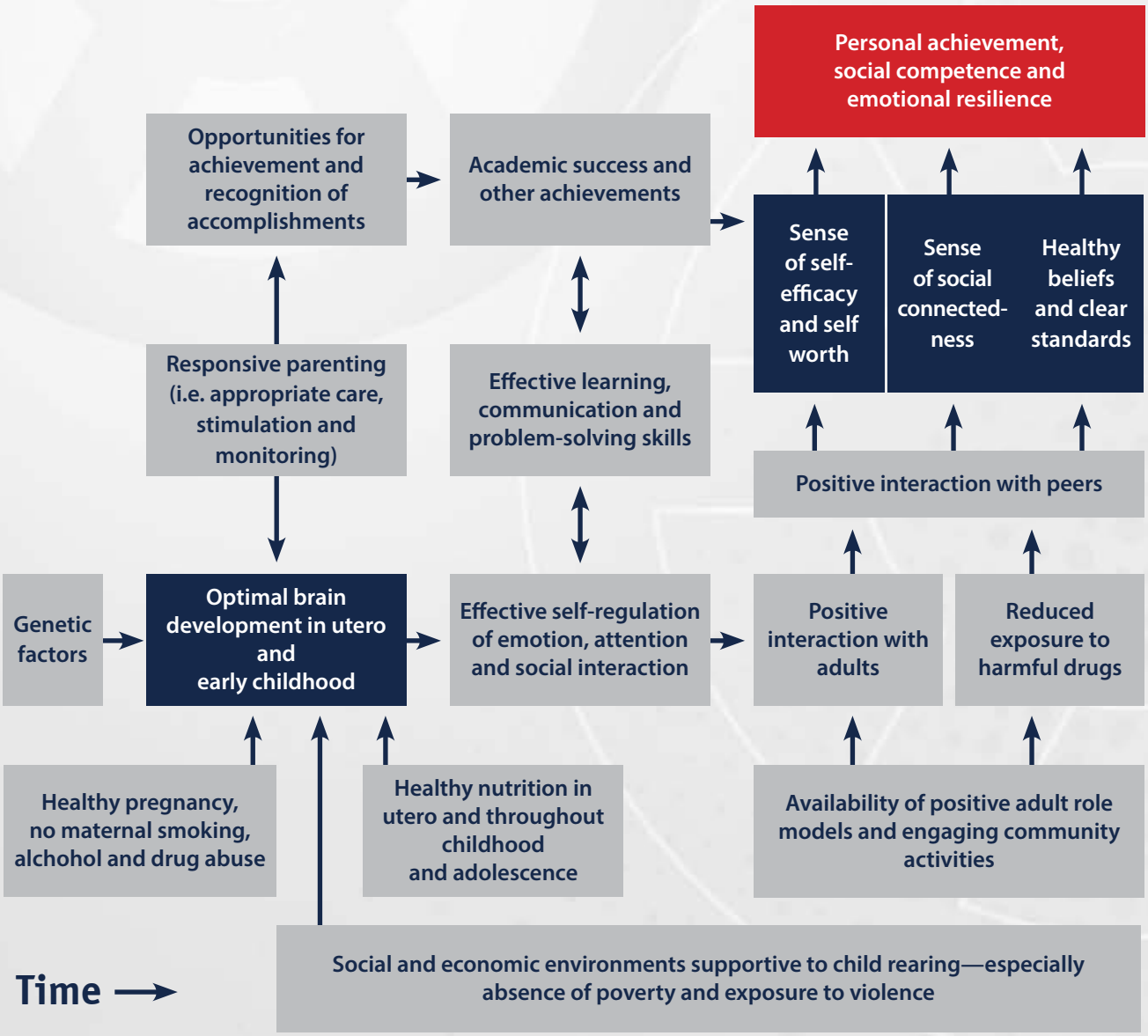
Further, many kids at high risk of abuse, due to overcrowded housing and abundant alcohol and drug availability, are more vulnerable to unplanned pregnancies. They must be encouraged through school to complete their education and move into a career, even if they have suffered an unplanned pregnancy. The Healthy Welfare Card and the other measures of this review are expected to make major inroads into the behaviour that causes unplanned pregnancies. However, specific support from family and community carers makes a major difference. Further, prevention beyond the measures of this review that should also be adopted include sex, sexually transmitted disease, drug and alcohol education in communities and schools where there is a high incident of unplanned pregnancy, and youth suicide.

There is a pattern of governments, communities and families failing to intervene during the critical period from conception to three years of age. This has led to a lifetime of disadvantage for at-risk children.

> Virtually every aspect of early human development, from the brain's evolving circuitry to the child's capacity for empathy, is affected by the environments and experiences that are encountered in a cumulative fashion, beginning early in the prenatal period and extending throughout early childhood.[43]

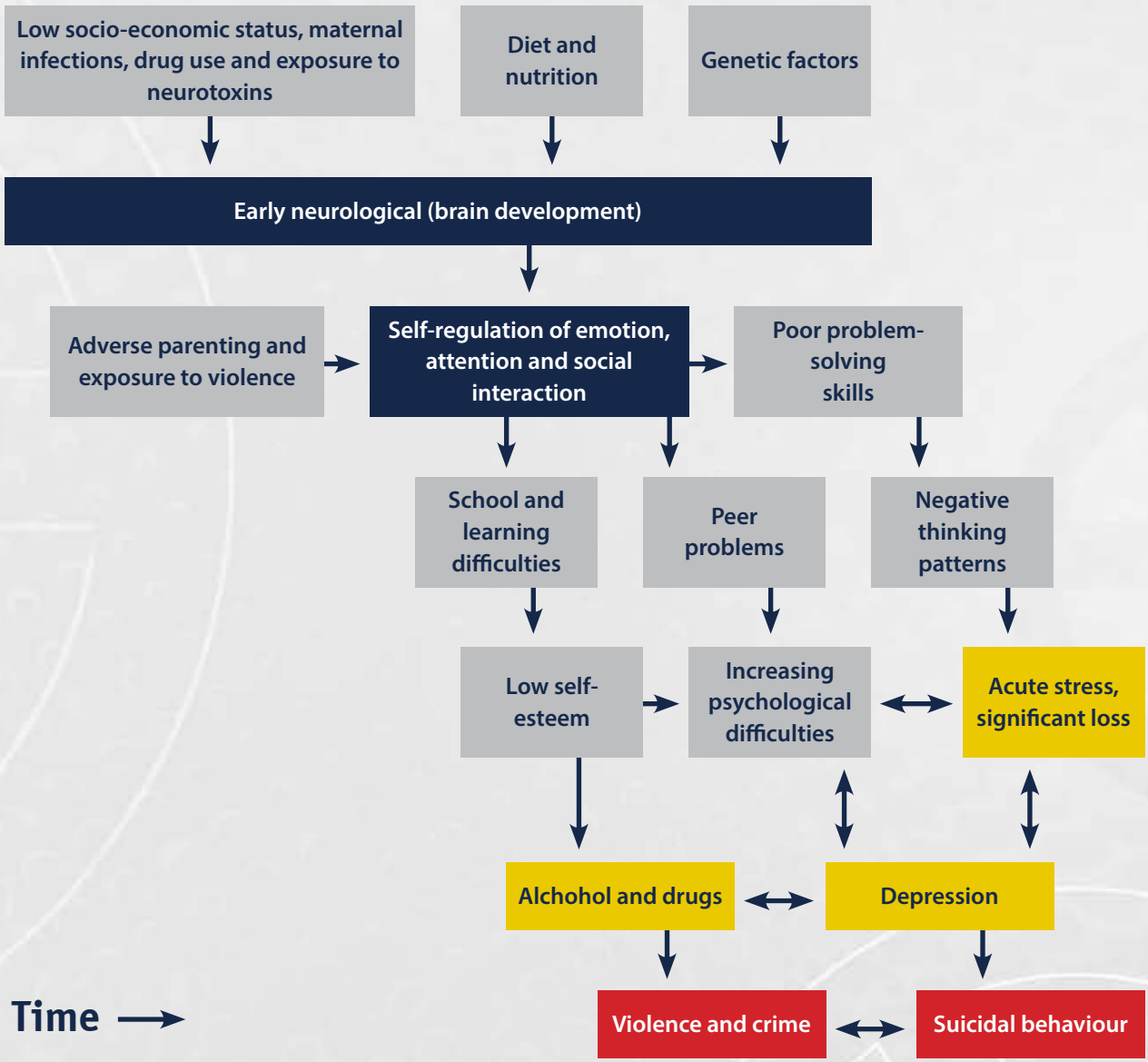
The value of early intervention cannot be over-estimated as a tool to mitigate the negative effects of poverty and disadvantage on children's short- and long-term prospects on their physical well-being and motor development, language and literacy development, cognitive development, general knowledge, social and emotional development, and executive functions.

Pathways to Resilience (Silburn, 2003)



With thanks to Professor Fiona Stanley

Pathways to Vulnerability (Silburn, 2001)



With thanks to Professor Fiona Stanley

To stop the cycle of disparity we need to achieve more than the elimination of poor drug and alcohol choices. We need to support pregnant mothers to have healthy pregnancies through prenatal programmes and continue to support their children through intensive early childhood programmes and effective methods of schooling. In combination with the Healthy Welfare Card, such an investment will be transformational and produce resilient, confident workers for the future. It will ultimately save billions of dollars for governments in future welfare and health costs, grow the economy and attack the problem of first Australian unemployment at its root cause.

Mainstream natal and prenatal care is often insufficient in its reach and intensity to meet the complex needs of families in disadvantaged and at-risk communities. Australia's consistently poor and declining education results and increasing strain on welfare demonstrates the need to intervene earlier to stop ongoing dysfunction in our most at-risk communities.[44] Future generations will look back at this period and not understand how governments could have failed to prevent such long-term human capital cost for Australia's most vulnerable citizens yet continued to spend billions in support after they became victims.

Key facts

- Babies born to first Australian mothers are much more likely to be preterm, have low birth weight and suffer perinatal death[45] and foetal alcohol spectrum disorder than babies born to other mothers.[46]
- By the time first Australian women in very remote areas reach 24 years of age, more than three-quarters (77%) have had at least one child, compared with the 19% overall Australian average for women in this age group.[47]
- By the age of three years, a child's brain has reached 90% of its adult size and thus acquired the building blocks of future capability.[48]
- Disadvantaged children are less likely to develop the required social competence and verbal communication skills to be school-ready.
- First Australian students are on average two to three years behind in reading and maths by the time they are 15 years old.
- 4.2 million, or 40% of the workforce, is currently below the minimum language, literacy and numeracy (LLN) standard needed to function in a knowledge economy.
- International research shows that the rate of return for every dollar invested in an individual decreases significantly as a child increases in age.[49]
- Strategies that use an integrated, multi-service approach to early intervention are recognised as the most effective ways to achieve parity for at-risk children.[50]

What we heard

- Children are our future; we should prioritise our efforts for them.
- Building the capacity of parents and carers for children under five is critical.
- Lack of educational attainment is the biggest barrier to employment.
- Helping newly pregnant women and mothers with unexpected pregnancies is critical.
- Alcohol and substance abuse is taking its toll on children and young families.
- Communities need to rally together to ensure the future of their youngest members is guaranteed.

Current approach to early childhood

Across government, the early childhood education system is complex and the provision of services is patchy and disjointed. While the Commonwealth is responsible for parenting payments, aspects of healthcare and children from 0 to 3 years of age, the states and territories are responsible for formal preschool education, health and community services.

The states and territories currently also meet the costs of supporting children with additional needs in schools. Both levels of government have a mix of some services for vulnerable families but these are rarely coordinated. If children were better prepared for school these costs could be lower.

The lack of cohesion between Commonwealth, state and territory governments and between relevant departments enables at-risk children to slip through the cracks and miss out on intervention for serious developmental problems. Medical specialist services that are already funded by the government are often ineffective and inaccessible for disadvantaged children. The reality for at-risk children is that because their home lives are so chaotic it is unlikely they will make it to a GP for a referral, onto a waiting list and eventually to a specialist appointment months later. Further, the mothers of such children are less likely to access critical information and support networks to educate them about the impact their lifestyle has on the unborn foetus. The common reports of foetal alcohol spectrum disorder in some first Australian communities is sad evidence of this.

An analysis of the Programme for International Student Assessment results from 2000 to 2006 showed that 'Indigenous students who had attended preschool for more than one year, scored, on average, 69 points higher than Indigenous students who had not attended preschool at all.'[51]

Given the critical importance of pre-school education for life outcomes, governments had established a target and invested heavily to ensure 95% of all first Australian four-year-olds in remote communities had access to early childhood education by 2013. Early estimates were that the target had been achieved, but recent changes to population confirms that enrolment was much lower than expected, with only 85% of remote first Australian children enrolled in preschool in 2013. We must do better than this for first Australian children; we must double our efforts, better engage parents and ensure first Australian children in remote areas get the benefit of access to essential early education.

Integrating these early childhood, medical and child protection services across governments, to improve access and provide holistic support for families prior to birth and throughout school, is critical. It is important to note that the integration of existing services plays a major role in the cost efficiency of highly effective intervention initiatives. Many of these services are already funded by governments but operate as silos and are uncoordinated, leading to a lack of comprehensive and preventative case management. Research shows that the provision of services that are collaborative and coordinated produce outstanding and long-lasting results for children in these programmes.

Early childhood development and adult literacy are often discussed as separate topics, yet the interrelatedness of these concepts is of utmost importance. Research shows that the most effective services to support lifelong learners begin at birth, involve families, target the poorest children, are sufficiently intensive and long-lasting, and are holistic—they include health, nutrition, and parenting. Services need to support both the parent and the child.

Supporting first Australian parents who need support to become literate and numerate so they can be their child's first teacher is just as critical a life skill as a job skill. Literacy and numeracy support is covered in Chapter 5.

Determinants of a healthy pregnancy

A mother's lifestyle is a significant determinant in the future of her children and their prospects for an independent future. Antenatal substance abuse poses significant risks to the unborn child.

Alcohol consumption during pregnancy can cause foetal alcohol spectrum disorder (FASD) and lead to damage to the brain structure of the developing foetus. The incidence of FASD in Australia is difficult to quantify. For first Australian children, estimates vary between 0.15 and 4.7 per 1,000 births. For the total population, estimates vary between 0.01 and 0.7 per 1,000 births. The estimates suggest in remote communities the rate may be as high as one in every four births.[52] The effect of this condition may include physical, mental, behavioural and/or learning disabilities with lifelong implications.

Smoking during pregnancy can result in lower birth weight, increased body mass index, decreased lung function and increased risk for development of asthma. First Australian mothers are almost four times more likely to smoke during their pregnancy than pregnant women nationally, and this proportion increases in more remote areas.

Illicit drug use during pregnancy means babies are more likely to be born preterm, have lower birth weight and head circumference, require resuscitation, be admitted to special care nurseries, and have longer stays in hospital. An Australian study has found that the number of newborns suffering serious drug withdrawal symptoms is now more than 40 times higher than in 1980.[53]

Alcohol, tobacco or drug use during pregnancy, or a combination, is likely to deliver children born with symptoms that impact on their lifelong development and wellbeing, such as problems at school, health and mental health problems, problems with alcohol and other drugs, and unemployment. The cost to children, their families and community and government is significant in terms of health, life trajectories and finances.

Evidence shows that participating in antenatal and parenting education programmes significantly improves the likelihood of a healthy birth.[54] Ideally this happens early in the pregnancy to provide the best chances for healthy foetal development. Yet first Australian mothers are less likely to access antenatal care or, if they do, tend to leave it to later in their pregnancy than other Australian mothers.[55] For this reason, the training of first Australian community-based midwives as part of an allied health delivery during pregnancy is essential to deliver practical therapeutic programmes with community-based support.

> The clear message from the research suggests that if we are to improve the outcomes for children in very vulnerable areas we need to focus as much on protecting their developing brains from chronic stress and traumatic insult as we do on stimulating learning.[56]

Child health services particularly in rural, remote and disadvantaged metropolitan areas often lack coordination, efficiency, and engagement with schools and families. Coordinating services, in line with the integrated services delivery model discussed below makes them more efficient, and improves the access and outcomes for the family. It is also imperative that the use of e-health and mobile health services are increased to enable cost-effective and stable service provision in remote areas.

Brain development from conception to three years of age

By the age of three years, a child's brain has reached 90% of its adult size. During this time our brain function and major neural pathways are becoming hardwired and many learning pathways are 'locked in'.[57] Multiple interconnected influences, from family environments to the availability of community supports and economic resources affect the development of these pathways. When damage occurs, such as FASD, only very serious and expensive intervention can make possible a normal childhood. Without this, many learning pathways are 'locked in'.[58]

The average brain growth is almost infinite from a single cell to 380 grams at birth to 1.3 kilograms by three years of age, and then only to 1.5 kilogram by 19 years of age when the brain's mass reaches its maximum.

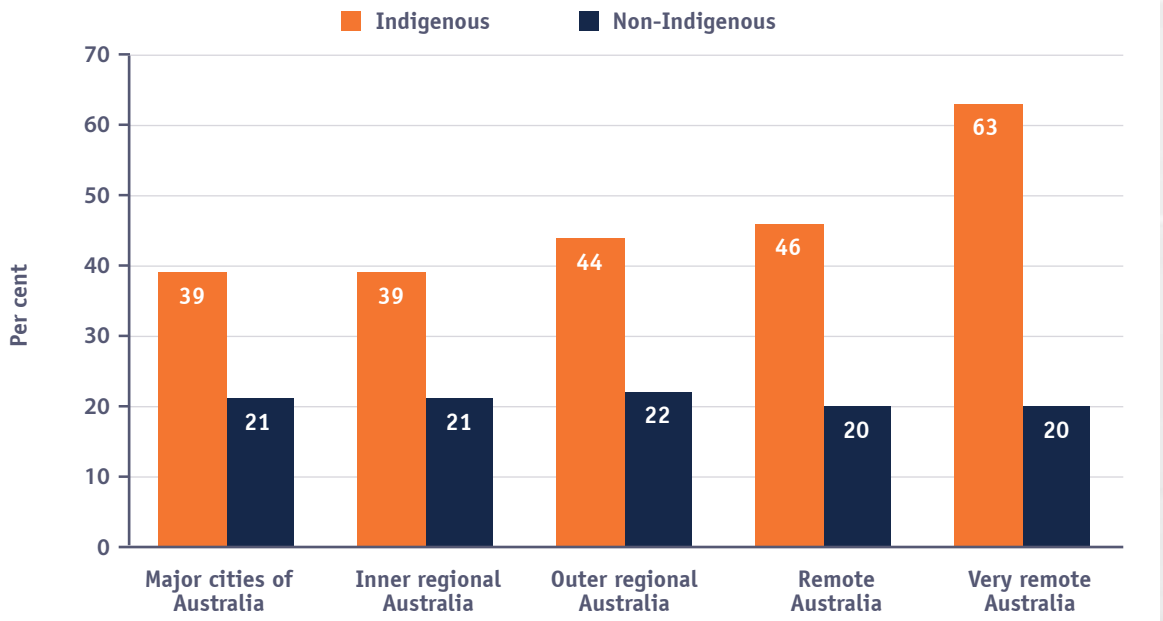
Neural networks affect the speed at which the child can process and retain information and absorb new information. These learning pathways are what we all rely on to undertake more complex brain functions like exercising judgement, problem solving and juggling priorities. A child who does not receive the required support and stimulation during these early years commences formal education without being school-ready and the cycle of failure has already commenced.

Most families, including first Australian families, provide opportunities for young children to develop and thrive and make good transitions into school and work. However, many first Australian children are vulnerable before they are born and therefore cannot reach their full potential as young children or adults.

The Australian Early Development Index (AEDI) is a measure of children's development in the first year of full-time primary schooling across five selected domains—physical health and wellbeing, social competence, emotional maturity, language and cognitive skills, and communication skills and general knowledge. Children who score in the lowest decile of the AEDI population assessed in any domain, are classified as 'developmentally vulnerable' since they demonstrate a much lower than average ability in the developmental competencies measured in that domain.

In remote Australia the picture is starker. The AEDI shows that nationally, first Australian children are more than twice as likely to be developmentally vulnerable than other children for every domain, and even worse in remote areas.[59] Figure 1 shows that the proportion of first Australian children rated as vulnerable on at least one AEDI domain is much higher in remote areas than it is in the major cities and regional areas.

Figure 1: Proportion of Indigenous and non-Indigenous children assessed to be vulnerable on at least one AEDI domain by remoteness area, 2012



Source: Australian Early Development Index 2012, Department of Education, unpublished data owned by the Department of Education and managed by the Social Research Centre.

It is this reality that means a child's development at 22 months of age is one of the best predictors of success and functioning in adulthood.[60] It is therefore imperative that at-risk families are supported from before pregnancy and throughout the first three years of their child's life.

Return on investment

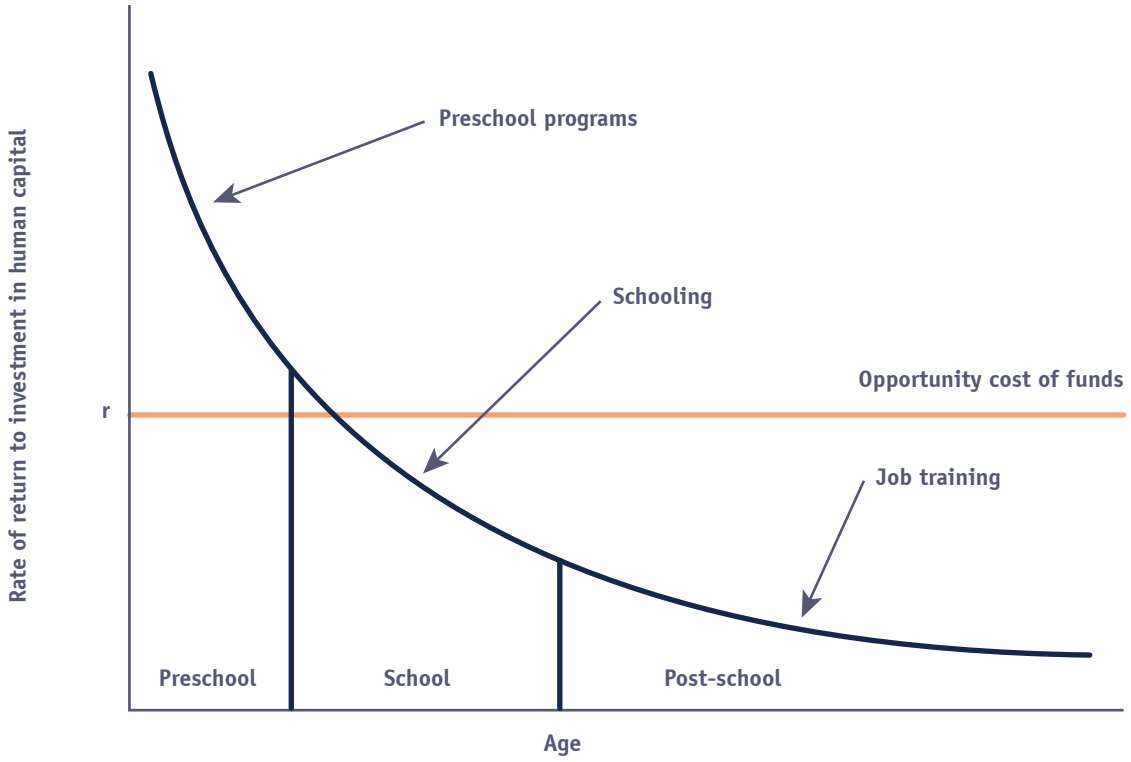
> Early experiences can translate into school readiness, academic success, and lifetime well-being. Success builds upon success. When more children in a community are ready to learn, community-wide levels of human and social capital rise. (James Heckman, 2000 Nobel Prize winner in Economics)

A nation which desires a highly competent population for the future to cope with the demands of the emerging knowledge-based world and global economy needs all its children to have access to a stimulating and healthy environment during the critical early years of development, regardless of family circumstances. Investment in the early years will have a substantial long-term economic gain for Australia as a whole.

Investments in the early period of life are more important than investments in education, post-secondary education, and remedial health care. The period of early child development is greater in importance for the quality of the next generation than the period children and young people spend in education or post-secondary education.

The economist Jacques van der Gaag has demonstrated the economic benefits of investing in early child development programming in *The benefits of early child development programs: an economic analysis*. Figure 2 illustrates that while the brain growth and maximum potential to change is highest before a child enters school, this is currently where public spending is the lowest.

Figure 2: The rates of return on human capital investment decrease with age, with the highest return on investments at preschool age



Rates of return to human capital investment initially setting investments to be equal across all ages

Source: Heckman, J 2006, 'Investing in disadvantaged young children is an economically efficient policy', presented at the Committee for Economic Development, The Pew Charitable Trusts & PNC Financial ServicesGroup Forum on 'Building the Economic Case for investments in Preschool', New York, 10 January.

There is a mismatch between opportunity and investment. The investment made in the first three years of a child's life gives the greatest returns, by far. According to one international study, with every $1 spent on early childhood education, society sees a return of over $7.[61]

But while it is clear from all the evidence that, not only is education the key to a productive society and that jobs tend to follow, it must be remembered that early intervention is long-term. There is still a generation of neglected Australians who know nothing better than a life of welfare. For this cohort, there are other more intensive measures, which are proposed in other chapters of this review.

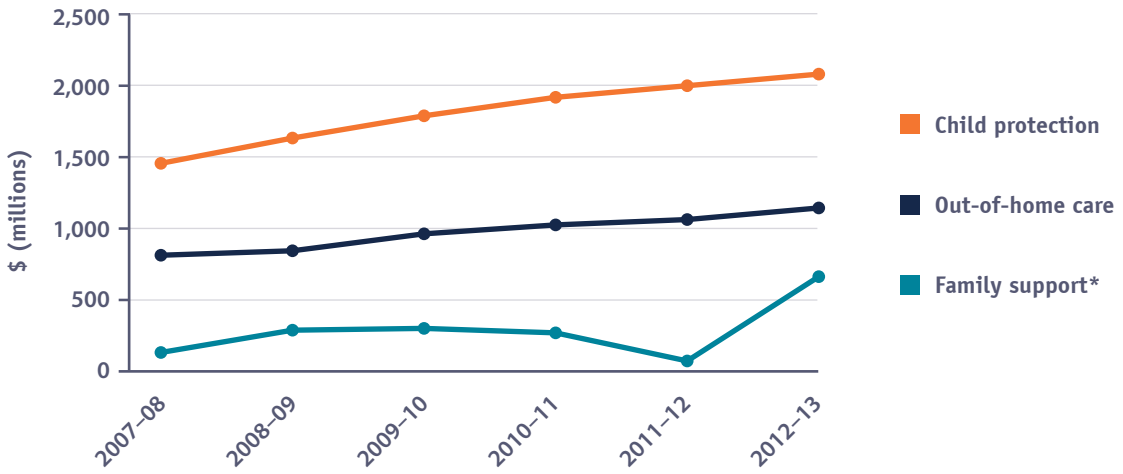
Shifting government spending to preventative services

Each year, government spending on protecting and removing children from their homes far outweighs spending on services that strengthen and support families, enabling them to maintain the family unit and raise healthy children. Funding is geared almost five to one towards interventions to protect children after harm has been done, rather than investing earlier as a preventative model.

In 2012–13, there was approximately $3.218 billion spent on protective services compared to approximately $664 million on preventative services. In 2010–11, total government spending for early child development for first Australians was $233 million compared to $980 million for child protection and out-of-home care services. Between 2007 and 2012, governments have increased spending on child protection and out-of-home care services on average by 7.5% annually (a total increase of $748 million).[62]

Intensive family support services are an immediate alternative to the removal of a child from their home. While spending on intensive family support services has increased at a greater proportion than child protection (around 30%), the total is still substantially below spending on protective services; and, for the first time since 2003, declined between 2011–12 and 2012–13, from $375 million to $304 million (see Figure 3).

Figure 3: State and territory government spending on child protection and family support (expenditure adjusted to 2012–13 dollars)



* Since 2011–12, family support services have included non-intensive services (lower level support to families in need), causing the reported spending to almost double; however, since the initial jump, spending on family support services has declined by 8.7%.

Source: Steering Committee for the Review of Government Service Provision 2014, *Report on government services 2014,* attachment tables, Productivity Commission.

We still need to continue to protect children from harm, but government spending patterns need to be reversed, over time, so that the focus is on early intervention. The objective of governments must be to move the focus from highly expensive and inefficient 'cures' to preventative measures from conception through to early childhood. This will also have the effect of generating significant downstream savings and boosting the productivity of our nation as we dramatically improve the capacity of our future workforce.

The case for redirecting government, community and business focus to the early years is clear. If we continue to ignore what the research and reality are telling us, we will continue to fail our most vulnerable children. It is paramount that all efforts to lift communities out of disadvantage are underpinned by an evidence-based approach to early childhood, before the cycle of failure has commenced. Supporting an at-risk child from conception must be the norm, not the exception.

Being 'school-ready'

Most families, including first Australian families, provide adequate opportunities for young children to develop and thrive and make good transitions into school and eventually, work. However, many disadvantaged children, especially first Australian children, are vulnerable before they are born and start school and don't reach their full potential as young children or adults.

Children who are healthy and attend preschool are much more likely to finish school and have better literacy, numeracy and social skills. Across Australia Indigenous children are less likely (by some 10 percentage points) to participate in preschool than other children,[63] and the proportion of first Australian 20- to 24-year-olds who complete Year 12 is 27.4 percentage points lower than for other young people.[64]

Developmental vulnerability at kindergarten tends to be compounded throughout life, with children who have difficulty making their transition to school more often ending up with poor educational attainment and low functional literacy; leaving school early; being at higher risk of unemployment and delinquency; and being more prone to substance misuse, crime and suicide.

This, in part, reflects the developmental risks associated with having children at a young age.[65] In very remote areas more than a third (37%) of first Australian teenagers have had a child by age 19. This compares to only 4% of all other 19-year-olds, and 3% of first Australian 19-year-olds in the major cities.[66]

Teenage pregnancies not only hinder the development of children but can put mothers at risk of long-term disadvantage. Young mothers are less likely to complete their schooling, resulting in weak employment prospects, an increased risk of ongoing welfare reliance and significantly less earnings over their lifetime.[67] At the same time the rest of Australia's boost in productivity has been fuelled by women increasing their participation in the labour force.

Evidence from NAPLAN shows that students who perform poorly in Year 3 continue to perform poorly in Year 5 and Year 7. This shows that disadvantage is unlikely to be overcome as a child progresses through school. The impact of poor literacy and numeracy skills of those who do join the workforce is holding business back.

The statistics speak for themselves. The Australian Bureau of Statistics 2006 Adult Literacy and Life Skills Survey (ALLS) revealed that Australian language, literacy and numeracy levels have shown little improvement in the decade since the 1996 International Adult Literacy Survey (IALS).

In order to reduce the resource intensive and economic burden of remedial education and pre-employment programmes, early intervention must occur before formal education starts.

A solution—integrated case management for mothers from prenatal to three years of age

The problem and solution are clear. In order to lift the life outcomes of Australia's most disadvantaged and at-risk children, we must invest earlier in evidence-based support services to provide targeted support for those most in need.

According to international and local research, components of an integrated and, most importantly, *early* approach includes:

- early detection and intervention for developmental delays and disabilities
- inclusive health, nutrition and social protection services
- teacher capacity and leadership building
- strengthening of instructional leadership
- engagement of parents and the broader community
- services responsive to local context, culture, priorities and needs.

Services need to be located as close as they can be to those who need it. The capacity for primary schools to reach families with children aged 0 to 3 years of age through their older sibling, along with their community settings makes them ideal locations for integrated services. School-based services which support children and their families from conception to formal school entry ensure optimum parenting and early child development support for the most sensitive period of brain development. Access to these services can vastly improve outcomes for children's behaviour, learning and health in later life. The earlier in a child's life these programmes begin, the better.

At the same time, we need to ensure that a clear message is delivered to all Australian parents—namely, that school attendance is not negotiable. The recent Remote Schools Attendance Strategy is having a positive impact, but much more needs to be done to ensure that all children have access to education and in many more schools.

Governments should work jointly to agree and implement a new approach within 12 months which includes progressive investment to implement integrated early childhood services and to dramatically improve attendance. The new approach should start with schools in the 200 communities that have the highest level of vulnerability and need as determined by the Australian Early Development Index, the National Assessment Program – Literacy and Numeracy, attendance results and the proportion of first Australian children. Should this initial approach prove successful, governments can consider further rollouts.

A successful early years integrated services intervention programme has been implemented at Challis Primary School in the Armadale region of Perth. The success of this model has demonstrated locally how major improvements in children's development can be achieved within a few short years if comprehensive case management with a range of essential services occurs effectively.

Challis Early Childhood Education Centre—a success story

Located in Armadale, a low socio-economic community in the south-east region of Perth, children attending the Challis Lower Primary School had experienced years of consistently poor and declining academic, health and social outcomes.

In 2009, the principal of Challis Lower Primary School sourced independent funding for the implementation of an early intervention programme. After conducting research on brain development, the principal identified the need to start from (or before) birth. There was emphatic evidence that the greatest brain growth period is between conception, birth and three years of age and that this is the most critically important time to possibly have an impact on a person's entire life.

The key to the programme is the integration of already existing services on the school grounds. These services include:

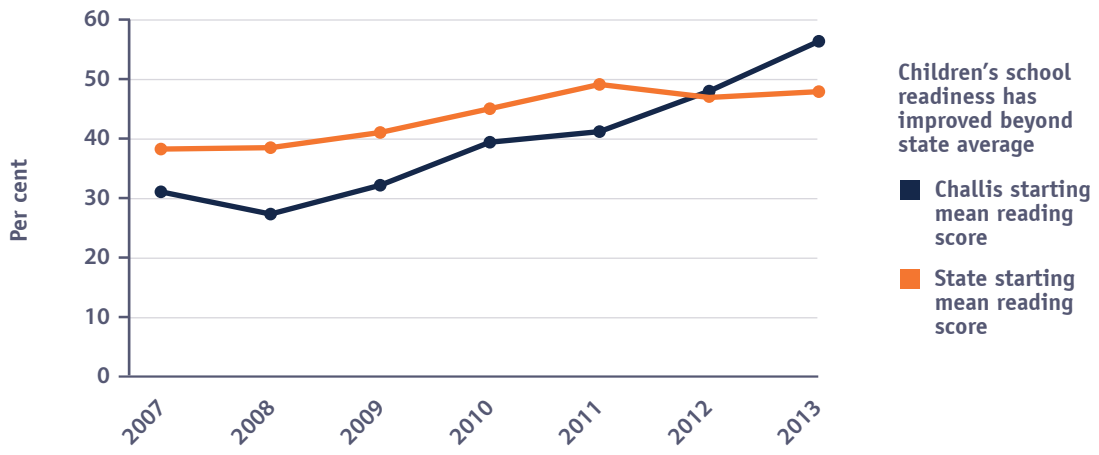
- a child health nurse
- a community health nurse
- playgroups
- a kindergarten for three-year-olds
- a family support worker
- support groups (grandparents, carers and parents)
- an occupational therapist
- a psychologist
- parent capacity-building workshops
- an immunisation clinic
- a speech pathologist.

Results

The impact of the Challis integrated early service model is measured using the performance indicators in primary schools (PIPS) tool administered by the University of Western Australia. The PIPS tool is used to assess children when they first enter primary school and measures their progress in literacy, numeracy and phonological awareness at the start and end of their first school year. It diagnoses student areas of strength and weakness, predicts future performance and identifies individual children who might benefit from early intervention.

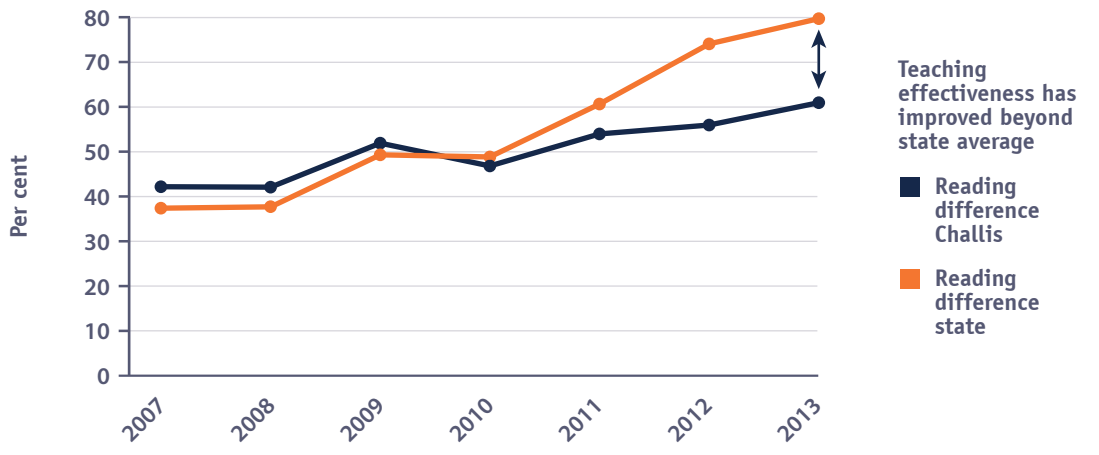
According to an assessment of the Challis programme by the Telethon Kids Institute (commissioned by Minderoo Foundation) using PIPS data, 'the period immediately prior to and following introduction of the new model reflect a profound local improvement' (see Figures 4 and 5).[68] Further, those who received from-birth exposure to the Challis programme (children who were in pre-primary in 2013), performed at a better-than-state average, despite being from one of the most disadvantaged communities in the state.

Figure 4: School readiness improvement—literacy indicator, Challis versus state, 2007–13



Source: Telethon Kids Institute 2014, A pathway from early childhood disadvantage for Australian children, unpublished.

Figure 5: Teaching effectiveness indicator, Challis versus state, 2007–13



Source: Telethon Kids Institute 2014, A pathway from early childhood disadvantage for Australian children, unpublished.

The assessment showed that at the end of 2010, for the first time, the gap between Challis cohort 1 and the rest of the state's PIPS results had begun closing. By the end of 2011, Challis cohort 2 students had exceeded the state average, and then in 2012, Challis cohort 3 students were exceeding the state average at the start and end of year. The turnaround in results has continued into 2013. Moving into 2014, the Challis leadership is now turning its attention to primary school and ensuring that the achievements of the Challis Early Childhood Centre continue through a student's schooling.

This has all been achieved using existing funded services and $340,000 per year from the Minderoo Foundation. Based on these outstanding results, the Government of Western Australia has provided funds over the next two years to integrate services and provide earlier engagement in 30 schools.

Integrated early childhood services, including Challis, delivered on school grounds have demonstrated some important lessons:

- There is no 'one size fits all' model and the integration of service delivery must be approached with a case-by-case diagnosis.
- School leaders must be equipped to navigate the plethora of existing government and non-government services they could be accessing.[69]
- Comprehensive case management and information sharing within government departments is essential to ensure an at-risk child is supported through transiency and family chaos.
- Intervention must be intensive for those with the highest need in order to be effective.
- From birth through to Year 12, education must be approached with an evidence-based mindset rather than reliance on what seems to work.

By approaching early service provision from a centralised school site position, significant social and economic benefits are possible for our most disadvantaged children.

Incentives for expectant mothers to access ante-natal care

Identifying mothers at risk early in their pregnancy is a key factor in supporting a healthy pregnancy. An incentive should be offered to encourage women who qualify for the maximum rate of Family Tax Benefit and are on other income support to identify their pregnancy early on (8–20 weeks) to access antenatal services. The local community nurse or health organisation can then monitor and support the pregnancy. The following case study from Finland suggests a possible incentive.

Finland's 'baby box' maternity package

In Finland, the government invests in helping parents to support their children's development from an early age. Maternity packages were introduced in Finland in the 1930s in an effort to reduce high rates of infant mortality and declining birth rates. Initially, they were aimed only at low-income mothers. The benefits were quickly recognised and within 15 years maternity grants were made available to all expectant mothers. Maternity grants are available as the Maternity Package— i.e. 'Baby Box'—or a one-off tax-free payment of €140. Sensibly, the majority of mothers choose the Baby Box.

The Baby Box act as a type of starter kit for new parents and contain helpful information, clothes, sheets, nappies, bath products, picture books, a bath towel and small mattress so that the box can even be used as the baby's first bed. It is claimed that these boxes help reduce infant mortality by promoting healthy sleeping patterns and providing a safe and secure sleeping environment for the baby. Finland currently has the fifth lowest infant mortality rate in the world: 3.4 for every 1,000 births. In Australia, the infant mortality rate for Aboriginal and Torres Straight Islanders is nearly twice as high as other Australians.

To foster a culture of reading, parents of newborn babies receive a gift of three books as part of the maternity package from their local mothercare centre. Finland produces more children's books per capita than any other country. Early childhood education is accessed almost universally—98% of preschool-aged children attend at least the last year of early childhood education—even though it is not mandatory. Children can attend free day care from the age of eight months to five years. Day care includes both full-day care centres and municipal playgrounds with adult supervision where parents can accompany the child.

To be eligible, mothers are required to visit a doctor or prenatal health clinic and receive a medical examination before the fourth month of pregnancy has ended. The health clinic then issues a pregnancy certificate which is required to claim the grant. In this way, the Baby Box engages mothers early and provides families with useful tools to care for their new child. By 1979, 100% of new mothers were receiving prenatal care in Finland—up from 20% in 1940.

In Australia, a number of Aboriginal health organisations have already successfully run a similar approach; including, among others, Alukura in Alice Springs and Apunipima in Cape York. The intention is that the Baby Box attracts pregnant women to the clinic or centre for prenatal care and they continue on with postnatal care. This successful model run by experienced Aboriginal health organisations such as these could be applied more broadly.

There needs to be the capacity for flexibility in the design of the incentive. While a number of Aboriginal health organisations have implemented the Baby Box initiative, it might not be the right strategy in some places, and other approaches identified by the health workforce may be more appropriate to the circumstances. Aboriginal health organisations have been highly successful in reducing the infant mortality rate over time. The key for this review is that the Baby Box demonstrates a good take-up of a very simple, incentive-based, effective measure and, most importantly, a means to engage new and expecting mothers to help ensure that support services are rapidly deployed where they are most needed.

Recommendation 1: Early childhood*

That all governments prioritise investment in early childhood, from conception to three years of age.

Governments must work jointly to agree on, and put into effect within 12 months, a new approach that includes progressive investment to implement integrated early childhood services and to dramatically improve attendance. This new approach should start with schools in the 200 communities that have the highest level of vulnerability and need (as determined by the Australian Early Development Index's results). If implemented successfully along the lines of existing proven models, governments can consider further roll outs.

In order for young children to be school-ready when they enter formal schooling governments will need to work jointly to coordinate and deliver intensive prenatal and holistic preventative early childhood services in target communities.

The implementation steps for delivering integrated services for prenatal and 0- to 3-year-olds must include:

1.1 co-locating and coordinating health, nutrition and other support services within schools or community hubs with outreach to schools with a single-point for accountability outcomes.

1.2 providing schools with support to build principal and teacher capacity to collaborate, engage with parents and external service providers, and to diagnose the needs of the school community and deliver services that are responsive to local context, culture, priorities and needs with accountability to a service standard

1.3 providing ready access to specialist services with the sharing of information between government agencies including health, community, child protection and education services to enable effective case management of vulnerable children and their families and optimise electronic health records

1.4 converting the Newborn Supplement into an incentive for women to identify their pregnancy as early as possible and be connected with a community nurse/case manager to coordinate prenatal care and access to the services listed above. The community nurse or case manager should work with a significant Elder to coordinate regular home visits to pregnant mothers, identify and intervene in behaviours which could harm the unborn child, and link the pregnant woman into community-based mother–child support groups. This approach is especially important for pregnant women in remote communities

1.5 providing comprehensive case management for vulnerable children from 0 to 3 years of age and their families to allow for early detection of, and intervention in, developmental delays, and provide a compulsory, structured explicit instruction programmes for three-year-olds led by an early childhood professional

1.6 extending the School Enrolment and Attendance Measure (SEAM) and Remote School Attendance Strategy (RSAS) programmes to each of the 200 sites, noting that the proposed case management approach would replace SEAM social workers (subject to recommendation 1.1 and 1.3)

1.7 driving accountability with compliance against service standards and aggregate data of children's development and improvement over time to be published on the CreatingParity website.

* This is one of the few recommendations that cost money, but it is not considerable. My wife Nicola and I have watched a lower socio-economic area transform the performance of its children through the local school, which encouraged government services (already available) to be located within its grounds and to be made available to parents from conception onwards. This initiative worked and is immediately replicable. The other measures of this report will save much more capital than this recommendation will cost.