

#### **Submission to:**

# The Independent Review into Regional, Rural and Remote Education

### August 2017

#### **Summary**

Central Australian Aboriginal Congress (Congress) is the largest Aboriginal community-controlled health service (ACCHS) in the Northern Territory, providing a comprehensive, holistic and culturally-appropriate primary health care service to more than 14 000 Aboriginal people living in and nearby Alice Springs each year as well as the remote communities of Ltyentye Apurte (Santa Teresa), Ntaria (Hermannsburg) and Wallace Rockhole, Utju (Areyonga), Mutitjulu and Amoonguna.

#### Key points:

- Education is a major determinant of health and wellbeing.
- There is a level of disadvantage in rural and remote Aboriginal communities that impacts on early childhood development, preschool and school readiness, school attendance and educational attainment.
- Quality, evidence-based early childhood programs have a significant impact on cognitive and emotional development, readiness for school, as well as long term educational outcomes, particularly in disadvantaged populations.
- Primary health care services have the key capacity and capability to promote health development from pre-birth to pre-school and from pre-school this shifts to education departments.
- Health and education agencies have common goals around child development and wellbeing.
  Partnerships between agencies are necessary for the early identification of health and development issues which will impact on learning, and the coordination of related services.
- Cultural security and community involvement is an important factor to engage Aboriginal students and families and enable school participation.
- As with evidenced-based medicine and clinical practice, evidence-based teaching and education is essential to student outcomes and quality improvement. Targeted teaching using data and individual student plans has been shown to be one of the most powerful teaching strategies to improve student progress.

#### **Recommendations:**

That the Australian, State and Territory governments:

- Commit to long-term, ongoing investments in evidence-based, culturally secure, early childhood development programs for children from disadvantaged families, integrated with family support services, as the foundation to school preparedness and long term educational attainment.
- 2. Commit to whole-of-government action on the social determinants which impact on healthy childhood development, educational attainment and ongoing health and wellbeing outcomes.
- 3. a) Support ACCHSs as primary health care providers and the most appropriate providers of early childhood development and preschool readiness programs for Aboriginal families;
  - b) Ensure that education departments begin their roles at pre-school and that preschool for disadvantaged children should commence at age 3
- 4. Continue to invest in partnerships between health and education providers, particularly for disadvantaged populations, to support the healthy development of young children so that they are ready to commence school and are able to participate optimally over the course of their education.
- 5. Set a target for equity in development for all children by the age of 7, measured annually through the Australian Early Development Census, with all children identified as developmentally vulnerable receiving intensive services.
- 6. Invest in community-initiated educational services that teach in language and in English, and are inclusive of the national curriculum and the local culture, so children living in remote areas can stay on country with their families, with the benefit of both formal and cultural education.
- 7. Commit to evidence-based teaching and education for all school students, including ensuring that students have individual learning plans through target teaching approaches. For the most vulnerable families this should include access to family support and therapeutic services provided by Aboriginal community controlled health services.

#### 1. Introduction and context for this submission

Central Australian Aboriginal Congress (Congress) is the largest Aboriginal community-controlled health service (ACCHS) in the Northern Territory, providing a comprehensive, holistic and culturally-appropriate primary health care service to more than 14 000 Aboriginal people living in and nearby Alice Springs each year as well as the remote communities of Ltyentye Apurte (Santa Teresa), Ntaria (Hermannsburg) and Wallace Rockhole, Utju (Areyonga), Mutitjulu and Amoonguna.

As an ACCHS, Congress functions within the framework of a comprehensive primary health care (CPHC) model, which aims to address health inequities and close the health gap between Aboriginal and non-Aboriginal people by providing clinical care as well as services and programs on issues such as alcohol, tobacco and other drugs; early childhood development and family support; and mental health and social and emotional well-being. A core function of CPHC and a key activity of Congress is advocacy for the broader determinants of health including housing; food security; law and justice; early childhood, employment and, in this context, education as a major determinant of lifelong health and wellbeing.

A key role for primary health care services in supporting the healthy growth and development of children is in the area of early childhood, especially in the years from pre-birth to 4 years of age. Congress' core services and programs therefore include an integrated and comprehensive approach to child and family support services which includes: centre-based early childhood learning programs at two sites in Alice Springs<sup>1</sup>; a Preschool Readiness Program; and Child Health Outreach Program. These programs are important primary and secondary prevention strategies which are proven to support cognitive development, readiness for preschool and school, and improve long term health and wellbeing outcomes for young children from disadvantaged families.

### 2. Key issues for Aboriginal children in rural and remote areas that impact on health, cognitive development, school attendance and educational attainment.

Many Aboriginal children in rural and remote areas grow up in an environment marked by disadvantage which compromises preparedness for school, ongoing attendance and educational attainment. This does not apply to all families – there are many children who are healthy and nurtured and supported to do well at school. Nevertheless, the overall picture shows:

- In 2016 the median individual income for Aboriginal people living in outback NT (SA4) was \$256/week compared with non-Aboriginal people at \$1077 (NT median=\$871).<sup>2</sup>
- Household incomes for Aboriginal people in outback NT are approximately half that of non-Aboriginal households, noting that household sizes in remote Aboriginal communities are, on average, twice as large as non-Aboriginal households.<sup>3</sup>
- Only 35 per cent of Aboriginal people living in remote areas of workforce age are employed.<sup>4</sup>
  Aboriginal people's use of income support is therefore at disproportionally higher rates than non-Aboriginal people.<sup>5</sup>
- Motherhood during teenage years is much more common among Aboriginal girls at 21 per cent compared with 4 per cent of all births.<sup>6</sup> One-parent families with dependent children are more common in Aboriginal households (21%) than in other households (6%).

- Aboriginal children have higher rates of health issues that impact on development and learning such as eye, ear and skin infections.<sup>7</sup>
- Aboriginal children are around 9.5 times as likely to be in out-of-home care and 7 times as likely as non-Aboriginal children to be receiving child protection services.<sup>8</sup>

The implication of this level of disadvantage is reflected in the developmental outcomes and educational attainment of Aboriginal children in the Northern Territory. For example, the Australian Early Development Census<sup>9</sup> has found that:

- Sixty per cent of Aboriginal children in the Alice Springs region are developmentally vulnerable on at least one measure of childhood development.
- Aboriginal children are twice as likely as non-Aboriginal children to be developmentally vulnerable in at least two measures and in Alice Springs 43% of Aboriginal children are developmentally vulnerable on two or more domains compared with 7% of non-Aboriginal children.
- The gap is even greater for Aboriginal children from the remote communities across Central Australia where up to 80% of children are developmentally vulnerable on two or more domains.

Preparedness for preschool and school is compromised and reflected in both National and Northern Territory statistics for Aboriginal and Torres Strait Islanders:

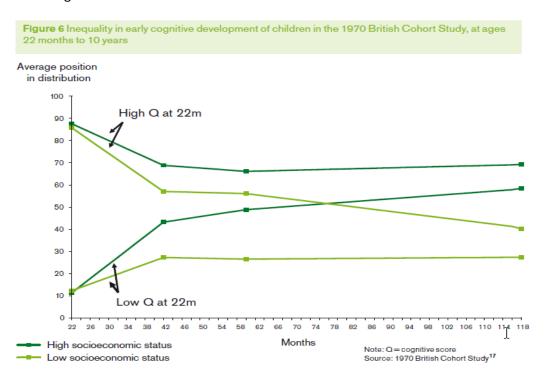
- School attendance rates in the Northern Territory are 14 to 30% lower for Aboriginal students, and the lowest in the country (the NT having the highest proportion of Aboriginal people).
- School attendance rates for Aboriginal children widen as they age, and are significantly worse in remote and very remote areas.<sup>12</sup>
- The proportion of Year 3, 5, 7 and 9 students at or above the national minimum standards for reading, writing, numeracy, spelling, and grammar and punctuation is significantly lower for Aboriginal and Torres Strait Islander than for non-Aboriginal students.<sup>13</sup>

## 3. Cognitive development, readiness for school and educational attainment: The significant impact of early childhood education for children from disadvantaged families.

During the first few years of life, interactions between genetic make-up, environment and early experience have a dramatic impact on how the brain forms. During these critical first few years, children need stimulation and positive relationships with care givers to develop neural systems crucial for adult functioning. <sup>14</sup> By the age of five, many of the developmental gateways for language acquisition, self-regulation and cognitive function have been passed, and a child's developmental trajectory already set. <sup>15</sup>

Children who grow up in a disadvantaged environment do not develop the brain capacity to do well in education and, even though they attend primary school, will on average do badly and drop out as soon as they are old enough. Traits such as impulsivity, poor concentration, lack of self-control and self-discipline are more likely. <sup>16</sup>

The following graph shows how much the early childhood environment impacts on brain development for children born with both high IQ and low IQ. The difference in outcomes for children from low income families is likely due to children's experiences in the first three years of life in their homes. The things that make the difference include daily one on one interactions and talking with young children, daily reading, going to bed at regular times, being physically active and having a good playgroup of children of similar age.<sup>17</sup>



Fair Society, Healthy Life 18

There is substantial evidence to show that structured early childhood programs improve the trajectory for children from at-risk and vulnerable families by supporting cognitive and emotional development. As noted above, in the first few critical years, children need responsive care and stimulation including strong, positive relationships with primary care givers to develop neural systems crucial for adult functioning and positive mental health. For example, the Abecedarian Approach is a preventative program for children at high risk of developmental delay due to social and economic disadvantage. It has four main elements – Learning Games, Conversational Reading, Enriched Care Giving and Language Priority.

The Abecedarian intervention has been shown through randomised controlled studies to prevent intellectual disabilities in disadvantaged children. <sup>19</sup> Nearly all disadvantaged children with an IQ in the normal range who underwent the Abecedarian program maintained their IQ while more than half of the children who did not go through the program dropped their IQ below 84 by age 3. This is consistent with data from many other studies, showing that many children from disadvantaged backgrounds dramatically lose their cognitive capacity after birth.

It is too late to wait until a child is ready for school at around 5 years to address vulnerabilities in development, as by this point many developmental gateways have been passed, and a child's developmental trajectory already set. After this point, interventions require increasing amounts of resources and produce diminishing returns as the child gets older.<sup>20</sup>

Longitudinal studies show that the Abecedarian approach has long lasting effects well into adulthood with participants doing better at school and gaining more years of education and better employment outcomes well into adulthood. For example, adults who had participated in the Abecedarian program as a child were four times more likely to have earned a university degree by the age of 30, compared with those who had not participated in the program.

#### 3.1. Targeted, population approach to early childhood learning

Ideally all children should have access to quality evidence-based early learning programs. However, early childhood interventions are most effective when they are targeted for children from disadvantaged families. <sup>23</sup> As noted above, Aboriginal children, particularly in rural and remote areas, are much more likely to be developmentally vulnerable. Hence there is a strong argument for preventative early learning programs, accessible to Aboriginal children from vulnerable families.

The ninth Closing the Gap report notes that 87 per cent of all Aboriginal children were enrolled in early childhood education in the year before full-time school, compared with 98 per cent of their non-Aboriginal counterparts. However not all early learning programs are comparable in quality and evidence-base. These programs must be of the same standard and be able to achieve the measurable outcomes expected of programs such as the Abecedarian approach.

Evidenced-based, early childhood programs should be provided by primary health services and integrated with other health programs. <sup>24</sup> This is because health services are a primary contact for pregnant mothers and very young children. <sup>25</sup> Additionally the provision of these early learning services by primary care services also allows for: the provision of child health and development checks including language assessments and immunisations; the early identification of further needs; referrals to allied health and specialist services; as well as coordinated care and case management.

Early childhood programs for Aboriginal children should to be delivered through Aboriginal community-controlled health services, inclusive of supportive services including family/parent engagement and support, transport and the provision of nutritious food. This recognises and integrates the multiple factors needed for healthy child development (e.g. stimulation and nutrition), as well as the social determinants of health (e.g. social support for low-income families, transport).<sup>26</sup>

Congress for instance, operates two early learning centres using the Abecedarian Approach Australia (3a). *Ampe Kenhe Apmere* is for working families and also provides early childhood education. Many of the children enrolled in the Centre are in out-of-home care. *Arrwekele akaltye-irretyeke apmere* is an early childhood learning centre for Aboriginal children from non-working families living in Alice Springs, aged 6 months to 3 years old. All families also have access to a range of holistic services for children and their family services for example: nurse home visitation through the Australian Nursing Family

Partnership Program (ANFPP); a Healthy Kids Clinic; a Preschool Readiness Program; family support services including Targeted Family Support Services and Intensive Family Support.

#### 3.2. Addressing the social determinants to educational attainment

Early childhood development is a key social determinant of health and wellbeing, however it is not sufficient to aim for 95 per cent of children to be enrolled in early learning programs without addressing the other determinants such as poverty, housing, food security, meaningful employment and racism — which equally have a powerful effect on the health and well-being of Aboriginal children. Action across the full range of social determinants is necessary to improve developmental outcomes and the educational attainment of developmentally vulnerable children, break the cycle of disadvantage and achieve the Closing the Gap targets.

This requires whole-of-government action including commitments to early childhood development and learning, primary and secondary education accompanied by psychosocial support measures (e.g. positive role models, healthy activities); support for workforce participation and development of skills; healthy relationships and community participation. <sup>28,29</sup>

#### **Recommendation 1:**

Commit to long-term, ongoing investments in evidence-based, culturally secure, early childhood development programs for children from disadvantaged families, integrated with family support services, as the foundation to school preparedness and long term educational attainment.

#### **Recommendation 2:**

Commit to whole-of-government action on the social determinants which impact on healthy childhood development, educational attainment and ongoing health and wellbeing outcomes.

#### 4. Health and education roles and partnerships

Early childhood development and preschool readiness programs (0-3 years) should be provided by primary health care providers, and for Aboriginal children, by Aboriginal Community Controlled Health Services. ACCHSs, through the delivery of primary care and antenatal and perinatal services, establish supportive and ongoing relationships with mothers, families and children in the period from conception to 3 years of age. <sup>30</sup> After this time, it is the responsibility of the education sector for preschool and primary education.

Close collaboration between health and education providers is none-the-less imperative, particularly for children from disadvantaged families. The Australian Government's Departments of Health and Education and Training are funding the Connected Beginnings Program (an outcome of the Forrest Review), with a focus on integrating early childhood, child and family health, and family support services with schools in a number of disadvantaged Aboriginal communities.

Through Connected Beginnings, Congress and local preschool and schools have established partnerships to identify children 0-5 years who may be at risk of poor health and development outcomes which will

impact on learning and educational attainment, then coordinating additional services as needed including specialist services, allied health and targeted family support.

The purpose of the partnership is to ensure children are healthy and well prepared for school through early identification and coordination of services. There are currently 15 pilot projects operating through Connected Beginnings over a limited funding period. While it is still too early to measure outcomes, the ongoing formal relationship between education and health will support the healthy development and education of children and achieve the common goals of both agencies.

#### **Recommendation 3**

- a) Support ACCHSs as primary health care providers and the most appropriate providers of early childhood development and preschool readiness programs for Aboriginal families;
- b) Ensure that education departments begin their roles at pre-school and that preschool for disadvantaged children should commence at age 3

#### **Recommendation 4**

Continue to invest in partnerships between health and education providers, particularly for disadvantaged populations, to support the healthy development of young children so that they are ready to commence school and are able to participate optimally over the course of their education.

#### 5. Equity in childhood development.

#### 5.1. All children should be developmentally equal by the age of 7

Notwithstanding early childhood development, the education system has a responsibility to improve educational engagement and results for Aboriginal children in remote areas. In Canada, for example they have had a goal for decades to try to ensure that all children are developmentally equal by age 7 or year 2. This goal should be adopted in education policy. This would require intensive follow up of all the children identified as developmentally vulnerable in the Australian Early Development Census which would need to be done annually.

#### **Recommendation 5**

Set a target for equity in development for all children by the age of 7, measured annually through the Australian Early Development Census, with all children identified as developmentally vulnerable receiving intensive services.

#### 6. The specific needs of Aboriginal communities and their children.

Fundamental to the gap between Aboriginal and non-Aboriginal people is the historical and ongoing impact of colonisation which led to dispossession; exclusion; discrimination; marginalisation; the forcible removal of children from their families; and the contemporary public policies that continue to disempower Aboriginal communities.

The combined impact of these social forces is intergenerational trauma, which has made it more and more difficult for parents to provide their children with the best start to life. Intergenerational trauma manifests as high rates of suicide, poor mental health and social and emotional wellbeing and adverse behaviours including panic attacks, anxiety, sleep disturbance, severe obesity; smoking, illicit drug use, alcoholism; and intercourse at an early age.<sup>31</sup>

Aboriginal control community controlled health services recognise the impact of colonisation, intergenerational trauma and loss of connection to family, community, country, language and culture. Clinical services, particularly Social and Emotional Wellbeing services, are therefore trauma informed. All services are culturally secure and attract, train and retain Aboriginal staff leading to greater cultural appropriateness of services. ACCHS have a strong practice of community engagement founded on strong relationships with the community, and Aboriginal governance with individuals and communities encouraged and enabled to participate in decisions on service delivery, including though formal governing Boards.

The establishment and functions of ACCHS are in response to a mainstream health system that has traditionally isolated Aboriginal people and contributed to the vast health gap. Similarly, as mainstream education services were not working for their community in remote Western Arnhem Land, the Kabulwarnamyo outstation (pop ~50) has recently established its own bilingual/bicultural community school. Its size means it does not qualify for government school resources, so children must move to town to be educated. Families' moving out of the area is a threat to community cohesion and local employment. Many parents are Warddeken rangers of 1.4 million hectares of global conservation and cultural significance. Furthermore, living on traditional lands with strong connection to family, community, country, language and culture has physical, mental and emotional health benefits, including reduced substance abuse and violence.<sup>32</sup>

The Nawarddeken Academy website (<a href="http://www.nawarddekenacademy.com/">http://www.nawarddekenacademy.com/</a>) provides further insight into the school itself, including this excerpt:

The Nawarddeken Academy is a unique bi-cultural, bi-curriculum school in the remote indigenous outstation of Kabulwarnamyo (Warddeken Indigenous Protected Area, western Arnhem Land). It was established at the request of local indigenous elders and has been operating since August 2015. The Nawarddeken Academy started operating as a one-teacher school with eight students. The Academy now has two permanent, full-time teachers, three casual Indigenous teaching assistants and 19 students (15 primary and 4 early childhood).

It has grown from the capacity to teach 12 students to the current capacity to teach 30 students (20 primary and 10 early childhood). Students have made outstanding progress in literacy and numeracy, with some students advancing up to three times faster than local benchmarks. The community has joint ownership of the Nawarddeken Academy and actively participates in the direction of the school and also in the education of its children on a daily basis.

An average school day begins with literacy, numeracy, science and art in the mornings, consistent with the national curriculum. After lunch, the students focus on cultural learning

activities guided by the community and 'bush trips' that take advantage of the unique natural environment and cultural setting in which the school is situated.

In these early days, the school relies on private funding and donations. The website notes that it likely that the school will eventually be a non-government school. Government funding is anticipated as part of this model as non-government schools receive contributions based on the socio-economic status score of students.

#### **Recommendation 6**

Invest in community-initiated educational services that teach in language and in English, and are inclusive of the national curriculum and the local culture, so children living in remote areas can stay on country with their families, with the benefit of both formal and cultural education.

#### 7. Evidenced-based teaching

The health sector rigorously uses research evidence and data to inform practice and to continuously improve performance. For example, health services provided by ACCHS such as Congress have a dedicated Continuous Quality Improvement (CQI) program and staff, using clinical data to monitor outcomes and continuously improve services. All new programs are evaluated. Relationships with researchers are strong, and Congress has recently become a partner in academic health science centre which will see a number of key health and research organsiations undertaking innovative, evidence-based projects to improve health care policy and practice in the region.

Similarly, teaching strategies with the greatest impact are those that use evidence to inform and improve teaching. Professor John Hattie is currently driving evidence-based teaching in Australia and the importance of using evidence of learning to target teaching. However, according to the Grattan Institute while Australian schools do collect a significant amount of data, it may not necessarily be the right data, nor is it effectively or rigorously used.<sup>33</sup> Data collection should provide detailed, diagnostic information on specific aspects of a student's understanding. Furthermore, teachers must be provided with the time, tools and training to collect and use evidence to target their teaching.

#### 7.1. Targeted teaching and individual learning plans

According to the Grattan Institute, targeted teaching requires teachers to identify learning needs of individual students and adapt their teaching, track individual student's progress and provide feedback or more support. Targeted teaching also requires teachers to review and analyse student progress data and understand how their teaching impacts on student learning in order to continuously improve it. This can have the combined effect of lifting the performance of students who are behind as well as finding ways to challenge students who are well ahead. Done well, these strategies can increase the amount of learning by an extra five to 11 months of progress. This makes them more effective than almost all other teaching interventions. The strategies can be adapted as a strategies can be a strateg

There are examples of schools in different parts of Australia that have children on individual learning plans with appropriate support services and are able to make a significant difference to learning outcomes even when children begin school developmentally vulnerable on a number of domains in the AEDC scores.<sup>36</sup>

This has been well described in the *Revolution School* TV series on Kambrya College in Melbourne. An excerpt from the series website is very informative:

In 2008 Kambrya's Year 12 results put it in the bottom ten per cent of secondary schools in Victoria. Making the Grade follows the transformation of the school under the leadership of Principal Michael Muscat, to the point where it is in the top 25% of schools. Muscat and his colleagues manage more than 1000 students, including those struggling to cope with school and home life. Making the Grade gives a raw and honest insight into the challenges facing these teenagers, while also showcasing what really works in classrooms to improve academic results. The series highlights the internationally renowned research of Professor John Hattie, and one of the world's top ranked education institutions, the University of Melbourne's Graduate School of Education. During 20 years of research analysing more than 70,000 studies involving a third of a billion students from around the world, Professor Hattie has established what is most effective to improve student learning.<sup>37</sup>

#### **Recommendation 7**

Commit to evidence-based teaching for all school students, including ensuring that students have individual learning plans through target teaching approaches. For the most vulnerable families this should include access to family support and therapeutic services provided by Aboriginal community controlled health services.

<sup>&</sup>lt;sup>1</sup> Ah Chee, D; Boffa, J and Tilton, E 2016 Towards an Integrated Model of Child and Family Services in Central Australia *Medical Journal of Australia* 205 (1): 8. **doi:**10.5694/mja16.00385

<sup>&</sup>lt;sup>2</sup> 2016 Census of Population and Housing. Aboriginal and Torres Strait Islander Peoples Profile (Catalogue number 2002.0) Northern Territory - Outback (702) 1344930.4 sq Kms

<sup>&</sup>lt;sup>3</sup> 2016 Census of Population and Housing. Aboriginal and Torres Strait Islander Peoples Profile (Catalogue number 2002.0) Northern Territory - Outback (702) 1344930.4 sq Kms

<sup>&</sup>lt;sup>4</sup> Australian Bureau of Statistics (ABS) (2016) National Aboriginal and Torres Strait Islander Social Survey, 2014-15. Available: http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4714.02014-15?OpenDocument#Publications

<sup>&</sup>lt;sup>5</sup> Australian Council of Social Service / Social Policy Research Centre (2016) Poverty in Australia. ACOSS, Strawberry Hills.

<sup>&</sup>lt;sup>6</sup> ABS – births, Australia <a href="http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/3301.0Main%20Features52015?opendocument&tabname=Summary&prodno=3301.0&issue=2015&num=&view="http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/3301.0Main%20Features52015?opendocument&tabname=Summary&prodno=3301.0&issue=2015&num=&view="http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/3301.0Main%20Features52015?opendocument&tabname=Summary&prodno=3301.0&issue=2015&num=&view="http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/3301.0Main%20Features52015?opendocument&tabname=Summary&prodno=3301.0&issue=2015&num=&view="http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/3301.0Main%20Features52015?opendocument&tabname=Summary&prodno=3301.0&issue=2015&num=&view="http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/3301.0Main%20Features52015?opendocument&tabname=Summary&prodno=3301.0&issue=2015&num=&view="http://www.abs.gov.au/ausstats/abs.gov.ausstats/abs.gov.ausstats/abs.gov.ausstats/abs.gov.ausstats/abs.gov.ausstats/abs.gov.ausstats/abs.gov.ausstats/abs.gov.ausstats/abs.gov.ausstats/abs

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<sup>&</sup>lt;sup>8</sup> Australian Institute of Health and Wellbeing: Child protection Australia 2014–15 Available: http://aihw.gov.au/publication-detail/?id=60129554728

<sup>&</sup>lt;sup>9</sup> Commonwealth of Australia. Australian Early Development Census National Report 2015 A Snapshot of Early Childhood Development in Australia, 2016.

<sup>&</sup>lt;sup>10</sup> Australian Institute of Health and Wellbeing: Learning and development. Available: http://www.aihw.gov.au/child-health/learning-and-development/

<sup>&</sup>lt;sup>11</sup> Commonwealth of Australia, Department of the Prime Minister and Cabinet, Closing the Gap Prime Minister's Report 2017.

<sup>&</sup>lt;sup>12</sup> Australian Institute of Health and Welfare (AIHW) (2015). Aboriginal and Torres Strait Islander Health Performance Framework 2014 report: Northern Territory. Canberra, AIHW

<sup>&</sup>lt;sup>13</sup> Australian Institute of Health and Welfare (AIHW) (2015). Aboriginal and Torres Strait Islander Health Performance Framework 2014 report: Northern Territory. Canberra, AIHW

<sup>&</sup>lt;sup>14</sup> Shonkoff J P and Phillips D A, From Neurons to Neighborhoods: The Science of Early Childhood Development, Committee on Integrating the Science of Early Childhood Development, Editor. 2000, National Academies Press: Washington, DC.

<sup>&</sup>lt;sup>15</sup> Tayler C, Cloney D S, and Niklas F, A bird in the hand: Understanding the trajectories of development of young children and the need for action to improve outcomes. Australasian journal of early childhood 0 2015. 40(3): p. 51-60.

<sup>&</sup>lt;sup>16</sup> Anda R F and Felitti V J (2012) Adverse Childhood Experiences and their Relationship to Adult Well-being and Disease: Turning gold into lead. The National Council Webinar, August 27, 2012; Available from: http://www.thenationalcouncil.org/wp-content/uploads/2012/11/Natl-Council-Webinar-8-2012.pdf

<sup>&</sup>lt;sup>17</sup> Marmot, M. et al 2010 Fair Society Healthy Lives Strategic Review of Health Inequalities in England post 2010, Published by the Marmot Review: www.ucl.ac.uk/marmotreview.

<sup>&</sup>lt;sup>18</sup> Marmot , M. et al 2010 Fair Society Healthy Lives Strategic Review of Health Inequalities in England post 2010, Published by the Marmot Review: <a href="https://www.ucl.ac.uk/marmotreview">www.ucl.ac.uk/marmotreview</a>.

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<sup>&</sup>lt;sup>21</sup> Ramey C T and Ramey S L, Early learning and school readiness: Can early intervention make a difference? Merrill-Palmer Quarterly, 2004. 50(4): p. 471-491.

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<sup>&</sup>lt;sup>24</sup> Engle PL et al. (2007). Strategies to avoid the loss of developmental potential in more than 200 million children in the developing world. Lancet, 369:229-242.

<sup>&</sup>lt;sup>25</sup> Early Child Development Knowledge Network of the Commission on Social Determinants of Health cited in CSDH (2008). Closing the gap in a generation: health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health. Geneva, World Health Organization

<sup>&</sup>lt;sup>26</sup> CSDH (2008). Closing the gap in a generation: health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health. Geneva, World Health Organization.

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<sup>&</sup>lt;sup>29</sup> Australian Government: National Aboriginal and Torres Strait Islander Health Plan 2013-2023

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