bankwest

Curtin University

BANKWEST CURTIN ECONOMICS CENTRE

THE EARLY YEARS

Investing in Our Future

Focus on Western Australia Report Series, No.13
August 2020

About the Centre

The Bankwest Curtin Economics Centre is an independent economic and social research organisation located within the Curtin Business School at Curtin University. The centre was established in 2012 through the generous support from Bankwest (a division of the Commonwealth Bank of Australia), with a core mission to examine the key economic and social policy issues that contribute to the sustainability of Western Australia and the wellbeing of WA households.

The Bankwest Curtin Economics Centre is the first research organisation of its kind in Western Australia, and draws great strength and credibility from its partnership with Bankwest, Curtin University and the Western Australian government.

The centre brings a unique philosophy to research on the major economic issues facing the state. By bringing together experts from the research, policy and business communities at all stages of the process – from framing and conceptualising research questions, through the conduct of research, to the communication and implementation of research findings – we ensure that our research is relevant, fit for purpose, and makes a genuine difference to the lives of Australians, both in WA and nationally.

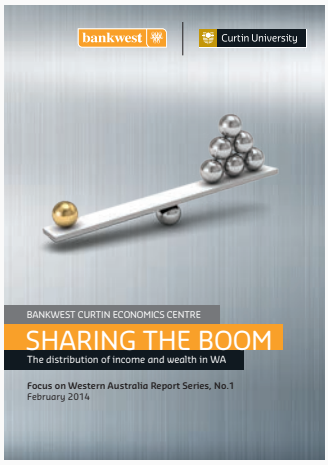
The centre is able to capitalise on Curtin University's reputation for excellence in economic modelling, forecasting, public policy research, trade and industrial economics and spatial sciences. Centre researchers have specific expertise in economic forecasting, quantitative modelling, micro-data analysis and economic and social policy evaluation. The centre also derives great value from its close association with experts from the corporate, business, public and not-for-profit sectors.

This report was written by: Rebecca Cassells, Mike Dockery, Alan Duncan, Daniel Kiely, Michael Kirkness, Chris Twomey, Toan Nguyen and Richard Seymour from the Bankwest Curtin Economics Centre at Curtin Business School.

It can be cited as: Cassells R., Dockery M., Duncan A., Kiely D., Kirkness, M., Twomey C., Nguyen T., and Seymour, R., (2020), 'The Early Years: Investing in Our Future, Focus on Western Australia Report Series, No. 13, August 2020.

Acknowledgements: We would like to thank all of our stakeholders for their insights and contributions to this report. Particular thanks to Rochelle Matacz, Manager and Clinical Supervisor of ECU Pregnancy to Parenthood Clinic for her insights and contributions relating to the mental health of children and parental relationships.

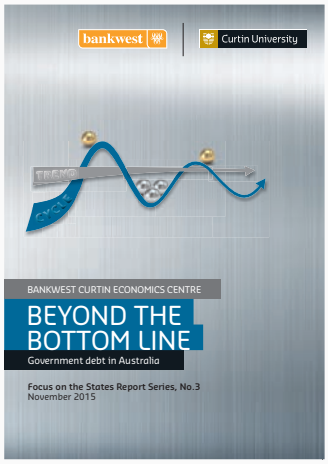
BCEC REPORT SERIES



Focus on Western Australia

This series presents a West Australia centric approach at analysing global events and domestic policy issues

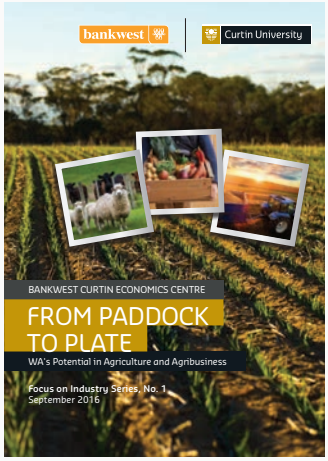
First release 2014



Focus on the States

This series presents a critical comparison of topical issues between the states and territories of Australia

First release 2014



Focus on Industry

This series examines trends in important industries and sectors within the context of the West Australian economy

First release 2016

CONTENTS

CONTENTS

LIST OF FIGURES

LIST OF FIGURES

LIST OF TABLES

FOREWORD

It is well known that the early years are critical in establishing positive developmental pathways in life. Adverse early childhood experiences increase the likelihood of physical and mental health problems, poor cognitive development and poor interpersonal relationships.

It is important that all children in our society have the opportunity to reach their full potential, and that the services provided to children and families allow for this. This is not only a moral question. It is also an economic one. Early intervention can help reduce long term pressure on our health and social welfare systems, and lead to better education and labour market outcomes.

While our understanding of child wellbeing and outcomes has improved, gaps still remain and more research is needed that focuses on the early years.

This latest report in the Bankwest Curtin Economics Centre's *Focus on Western Australia* series looks to add to our understanding of the lives of young children in Australia, the environment within which they live and learn, and the services provided to families to enable their children to thrive.

The report's findings offer a deeper understanding of the breadth, depth and drivers of disadvantage in the early years of a child's life, the impact of disadvantage on child outcomes, and the reinforcing effects of inequities in access to financial, developmental and learning resources.

A new BCEC Early Learning Disadvantage Index highlights the extent of inequality of early learning opportunities across Western Australia and Australia.

A better way forward is possible. Our children are our future and we owe it to them to give them the best opportunity to develop their unique potential and create a better world. Let us keep them safe to grow and thrive in family, community and culture.

Professor Alan Duncan
Director, Bankwest Curtin Economics Centre
Curtin Business School, Curtin University

EXECUTIVE SUMMARY

The importance of the early years in influencing outcomes in later life has been well considered. What happens to a child in their first five years of life, their physical health, the connections they form, the resources they have access to and the early education and care they receive can have lasting impacts on their future outcomes.

This knowledge has led to an increased policy focus and investment in younger children, especially in relation to early intervention, childcare and education.

Despite this focus children are still entering the world and growing up in circumstances where they face significant disadvantage.

This report highlights the critical importance of investment in the early years, illustrating that disadvantage starts during pregnancy and extends through toddlerhood and in the preschool years, with significant differences in child outcomes evident across various domains including mental health, language development and early learning, well before formal school commences.

A new early learning disadvantage index highlights the extent of inequality of early learning opportunities across Western Australia and Australia. **The divide between the most advantaged and disadvantaged areas is staggering.**

Children living in the most disadvantaged communities are far less likely to be attending preschool, more likely to be developmentally vulnerable, less likely to have access to the internet at home and if they are attending preschool, are generally facing higher preschool student-to-teacher ratios.

The level of early learning inequality demonstrates that we still have a long way to go to achieve the commitment set by COAG in 2009 – *"By 2020 all children have the best start in life to create a better future for themselves and the nation" (COAG 2009).*

This also means that the role of Early Learning opportunities in providing an equalising effect for disadvantaged children is weakened.

Our report also demonstrates that family poverty is a particular issue for families with children under the age of five and shines further light on the disproportionate numbers of Aboriginal and Torres Strait Islander children in child protection systems, and the need for a better way forward.

Within Western Australia, children poverty rates have been increasing over time and currently more than one in five children under the age of five are living in poverty.

This has risen by almost 5 percentage points over the last decade and WA now has the third highest poverty rate among very young children.

The findings in this report draw out points in the first five years where evidence or data is lacking and where we need better policy responses. This includes a greater emphasis on making sure all children, but particularly those living in disadvantage communities, have full access to services and that both location-based initiatives and broader policy measures are put in place to break the cycle.

Key Findings

Demographic Profile

Number and Share of Young Children in WA

- In 2019, children aged 0-5 years comprised 7.9% of the WA population.
- The number of 0-5 year olds in WA has almost doubled from 125,500 in 1979 to 207,300 in 2019. However, the share of 0-5 year olds in WA has decreased from 10.1% to 7.9% across this same period.
- 40% of families with children in WA are one child families. A further 40% of families have two children.
- For the Greater Perth region, children are concentrated in the northern and southern growth corridors, within areas such as the City of Wanneroo and City of Swan to the north and, City of Rockingham and City of Armadale to the south.

Composition of 'The Village'

- Ellenbrook in the City of Swan, recorded over 4,100 0-5 year olds in 2016 - the highest number for an SA2 region across the State.
- This was followed by Baldivis (City of Rockingham), and Forrestdale - Harrisdale - Piara Waters (City of Armadale) and Madeley - Darch - Landsdale (City of Wanneroo).
- All four of these regions have a Socio-Economic Indexes for Areas (SEIFA) score of 6 or above, denoting lower than average levels of socio-economic disadvantage.
- Previous research has shown that critical family service delivery such as GP and Pharmacy services are not keeping pace with the population growth of young families.
- Five of the 25 regions with the highest number of 0-5 year olds in WA have a SEIFA score lower, denoting relatively high rates of socio-economic disadvantage for children living in these areas.
- These areas include Butler-Merriwa-Ridgewood, Balga-Mirrabooka, Riverdale-Kewdale-Cloverdale, Armadale-Wungong-Brookdale, Gosnells, Thornlie and Busselton.
- Children growing up in areas where there is higher relative adversity are more likely to be at risk of poorer outcomes. This can also impact on parental availability and resilience.
- Previous research that focuses on WA, has found that there is a lack of cultural diversity in the perinatal and infant mental health workforce.
- Further work is needed to ensure appropriate awareness of individual needs of communities in which services are delivered to ensure culturally appropriate service delivery.

Pregnancy to Age One

Fertility rates and number of pregnant women in WA

- The total fertility rate for women in WA declined from 2.10 children per woman in 2008 to 1.76 children per woman in 2018 – well below replacement rate.
- The total fertility rate for Aboriginal and Torres Strait Islander women is much higher standing at 2.51 in 2018, but has declined considerably since reaching a peak of 3.04 in 2015.
- The Greater Perth region had a total fertility rate of 1.76 in 2018, compared to 2.09 for the Rest of WA.

Health during pregnancy

- In 2019, only 63.4% of women attended their first antenatal care visit within the first 14 weeks of pregnancy.
- In 2018, the Great Southern region reported the greatest percentage of first time antenatal care visits within the first 14 weeks (82.9%), with the lowest rate recorded in the North Metropolitan area (57.1%).
- Across Australia, higher rates of hospitalisation for diabetes are observed in more remote areas, are higher for women in lower socio-economic groups, and are almost double the rate among Indigenous women.

Risky behaviour during pregnancy

- The ten regions with the highest smoking rates during pregnancy are located in regional and remote areas of WA.
- The Kimberley reports particularly high rates of smoking in the first 20 weeks of pregnancy, standing at 35%.
- For Australia there has been a significant increase in the number of women who drank no alcohol during pregnancy, moving from 36.2% in 2001 to 55.6% in 2016.
- This rate is the highest in WA standing at 65% followed by SA (57.1%), VIC (56.8%), and QLD (54.9%), with NSW reporting the lowest rate (49.4%).

Births and Early Infant Health

- The number of live births in WA increased from 31,040 in 2010 to 33,150 in 2019.
- As the WA economy experienced strong growth, so too did the crude birth rate.
- This is particularly reflected in the 2012 peak, which shows a 6.3% increase in GSP per capita, in conjunction with a 2.3% increase in the crude birth rate.
- In WA, the rate of Indigenous women giving birth as a share of the total number of women giving birth increased from 5.0% in 2015, to 5.4% in 2018.
- In WA, the proportion of births that are births by caesarean section increased from 33.6% in 2010 to 38.2% in 2019.
- Over the same period, induced labour has increased from 28.5% to 34.7%.
- One factor that can be attributed to the higher C-section rate is the older age at which women are having their first child. Other factors include obesity and in vitro fertilisation.
- WA's death rate of infants aged less than 1 year old sat at 3.1 per 1,000 live births in 2016, in line with the Australian average, and down from the rate of 3.6 per 1,000 live births reported in 2010.
- WA's death rate of infants aged less than 1 year old is higher for the lowest socio-economic areas (4.9 per 1,000 live births) relative to the average reported for the lowest SES areas across the nation (4.6 per 1,000 live births).
- In all states, excluding Tasmania, infant death was noticeably higher in lower socio-economic areas.
- Across all states, babies born in more disadvantaged areas had a higher share of infants born with a low birth weight.
- West Australian children have a high rate (91%) of full immunisation at aged two, and is in line with that reported nationally.
- Indigenous children both in WA and nationally, have slightly lower rates of immunisation relative to non-Indigenous children.

Tempus imperdiet nulla malesuada pellentesque elit eget gravida cum. Habitasse platea dictumst quisque sagittis purus sit. Aliquet bibendum neque convallis a. In scelerisque varius morbi.

- Children in more disadvantaged areas throughout WA have slightly higher immunisation rates (92.6%) relative to the most advantaged areas (90.5%). Higher immunisation rates also reported in more regional and remote areas compared to major cities.

Toddlerhood (2-3 years)

- Data from the 2018 AEDC suggested that 1 in 5 children in Australia were developmentally vulnerable on one or more domains by the time they started primary school – highlighting the importance of early detection and treatment of developmental problems in very young children.

- In 2017-18, only 53.0% of eligible toddlers were taken for their 12-month free child health check in the Perth metropolitan area, with only 28.9% taken for their 2-year free child health check.

Mental Health

- Research has found clear evidence that significant mental health problems can and do occur in very young children.

- There is very limited data available on the prevalence of mental health issues for WA or Australian children aged 0 to 5 years.

- Using the Longitudinal Study of Australian Children (LSAC) that follows the same children over time, we analyse mental health issues among toddlers and the associated drivers and protective factors.

- In 2006, 15.9% of toddlers in WA were estimated to have social-emotional competence problems, which was slightly lower compared to that for the whole of Australia at 16.3%.

- Parental care-giving style and mental health are linked to toddler social-emotional competence and behavioural problems.

- Social-emotional competence problems were more likely in 43.8% of toddlers, whose primary caregiver only rarely/sometimes showed affection, warmth, or engaged in activities with their child; and in the 28.5% of toddlers whose primary caregiver had a probable serious mental health illness.

- In 2006, nearly 1 in 4 toddlers in WA were estimated to have behavioural problems.

- Behavioural problems were more likely for the 46.3% of toddlers whose primary caregiver had 6 to 10 hostile parenting incidents over a six-month period; for the 43.5% of toddlers whose primary caregiver only rarely/sometimes showed affection, warmth, or engaged in activities with them; and the 38.2% of toddlers from households living in severe poverty.

Development of Language

- 1 in 5 toddlers in WA were estimated to have delays in language development, in 2006.

- 29.7% of toddlers from households living in severe poverty were estimated to have delays in language development.

- 29% of toddlers, whose primary caregiver's highest level of education was Year 10 or below, were estimated to have delays in language development.

Preschoolers (3-5 years)

Early Childhood Education and Care

- The ages between three and five years are a time when children really start to become more independent, inquisitive about the world around them, having far greater independence in everyday tasks and forming relationships with other children their own age.
- Very few children under 1 years old are cared for in a formal setting, however the share has doubled in the last six years from 6.6% to 12.3%.
- Children are most likely to be in formal early childhood care and education at age four.
- Across Australia, children participating in a standalone preschool setting has decreased over time. Preschool access peaks at age 4 year but spans ages 3 to 5 years.

Preschool Access and Equity Groups

- Not all children are accessing preschool at the same rate as their representation in the community.
- Children who attend preschool in the year before schooling are less likely to be developmentally vulnerable in their first year of school.
- In 2019 there were over 335,000 children enrolled in a preschool program across Australia and almost 35,000 in Western Australia.
- WA also has the lowest proportion of children enrolled in centre-based day care preschool programs, at only 6%, compared to 50% nationwide. This is an outcome of the WA funding model, which gives exclusivity to government and non-government schools with a preschool on site.
- Children from a non-English speaking background have the most inequitable outcome when it comes to preschool enrolments at the national level.
- Western Australia has seen the strongest improvement in preschool access for children living in low socio-economic areas – increasing by 11.8ppt.

Accessing Universal Early Childhood Education – 15+ hours

- Children should be accessing at least 15 hours of formal preschool each week in the year before school
- Nearly 30% of children enrolled in preschool are accessing less than 15 hours of preschool each week in the year before commencing formal schooling in Western Australia.
- WA saw the strongest improvement in the number of children accessing preschool in the year before full-time school between 2018 and 2019 (+4ppt).
- WA has seen a noticeable increase in both the proportion of indigenous and non-Indigenous children accessing 15+ hours of preschool each week.
- However, only 1 in 2 Indigenous children in WA are accessing 15+ hours of preschool each week, compared to 70% of non-Indigenous children.

Developmental Vulnerability

- Almost 1 in 5 children in WA in their first year of schooling are developmentally vulnerable on one or more domain(s)

- In WA the proportion of children developmentally vulnerable on one or more domains has decreased by more than 3 percentage points between 2012 and 2018.

BCEC Early Learning Disadvantage Index

- The BCEC Early Learning Disadvantage Index highlights the extent of inequality of early learning opportunities across WA and Australia.

- To construct our index, we have identified a number of indicators that capture key aspects related to a well-functioning early learning system – access to preschool, developmental outcomes and the level of resources a child in the early years has access to including access to the internet and student-teacher preschool ratios.

- The Index is used to map areas of relative advantage and disadvantage, profile areas of high and low disadvantage and to assess the key drivers of early learning disadvantage.

Early Learning Inequality across Australia

- 37% of children living in the most disadvantaged areas do not access 15 hours of preschool each week in the year before school, compared to only 3.5% of children in the most advantaged areas.

- 1 in 2 children living in the most disadvantaged areas are developmentally vulnerable on 2 or more domains, compared to the national average of 11.4%.

- The most disadvantaged areas are all located in remote and very remote regions of Australia, across both Western Australia and the Northern Territory. There is one exception – Elizabeth a suburb of Adelaide.

- These areas are characterised by high proportion of Indigenous children and low English competency among 0-5 year olds.

- The link between socio-economic status and early learning disadvantage is evident in these communities. Most are within the lowest SEIFA deciles, have access to less than half the equivalised household income, a higher share of single parent families and high rates of inadequate housing.

Western Australia

- The most disadvantaged areas are located in remote and regional areas throughout the state, with Halls Creek ranked first in the bottom ten, followed by Derby-West Kimberley, Withers-Usher and Kununurra.

- The most advantaged communities are generally located in Perth, with Cottesloe ranked first, followed by Two Rocks, Swanbourne and Claremont.

- Two-thirds of children in the most disadvantaged areas in WA are attending preschool for 15+ hours compared to 85 per cent nationally.

- Children in the most disadvantaged areas in WA also have high rates of developmental vulnerabilities, with 1 in 3 children assessed as developmentally vulnerable on one or more domain and 1 in 5 developmentally vulnerable on two or more domains.

- Two Rocks at the northern edge of Perth stands out as an anomaly - with very low levels of early learning disadvantage yet higher socio-economic disadvantage and high unemployment.

Child Poverty and Disadvantage

Child poverty incidence in WA

- The rate of child poverty can be assessed by calculating the share of children who live in households below 50 per cent of median household income.
- The measure of income used to calculate poverty incidence is adjusted to account for family size (through equivalisation) and housing costs (by using income after housing costs have been deducted).
- More than one in five children under 5 in Western Australia (20.7%) are living in families in poverty, using this measure.
- The rate of poverty among WA's children under 5 has risen by 4.9ppt over the last decade, from 15.8% in 2011.
- The overall poverty rate among children of any age in Western Australia is 14.9%, the equivalent of 94,000 children living in families in poverty.
- WA now ranks third in the rate of poverty among children under 5, sitting behind Queensland (21.4%) and New South Wales (20.8%).

National child poverty

- The national child poverty rate is 16.4%.
- Nearly one million children across Australia (965,000) are living in poverty.
- The national rate of poverty for children under 5 in Australia is 19.6%, equivalent to 285,500 children.
- Child care costs contribute to the incidence of poverty among families with children. The child poverty rate among children under 5 rises by 0.6 percentage points to 20.2% when out-of-pocket childcare costs are accounted for.
- National child poverty rates rose for the first time in a decade in 2017/18, having fallen consistently over the ten years from 2007 to 2016.

Child poverty depth

- Many people are forced to live in far deeper poverty than captured by the 'standard' poverty threshold of 50 per cent of median equivalised income.
- This report looks to explore the incidence of severe child poverty, by modelling the share of children who live in families with less than 30 per cent of median income.
- A single parent with one young child in severe (30 per cent) poverty has to live on less than $370 per week.
- More than 975,000 adults and 374,000 children in Australia are living in severe poverty, including nearly 100,000 children under 5.
- The rate of severe poverty among children under 5 in Western Australia has risen to 11.4% in 2017/18, compared to a national rate of 6.7%, with the gap widening consistently between WA and Australia over the last decade.
- Children aged under 5 in Western Australia are 1.7 times more likely to be in severe poverty than indicated by their population share.
- The growth in child poverty in Western Australia looks to have been driven by a combination of high housing costs, greater costs of child care and falling real after-housing-costs income.

Child Protection

International trends in child protection

- Our WA child protection system faces the same challenge as other English-speaking welfare states including the UK, US, Canada, Australia and New Zealand.
- In general, these states have statutory systems and interventionists services focused on managing the risk of serious child harm.
- The costs of child removal and out-of-home care services are rising without necessarily reducing rates of child harm, hospitalisation and death.
- Scandinavian welfare states that provide universal early childhood education, greater parenting support services and universal paid parental leave have lower underlying rates of child harm and child removal.
- Around 30 in every 1,000 children aged 4 years and under in WA were subject to child protection services in 2018-19 and the proportion has grown substantially in the last 10 years.
- In 2019, 7.2 per 1,000 children were in out-of-home care in WA, compared to 6.5 nationally.

The Problem of Over-Representation

- Aboriginal children currently represent 58% of children aged 0-4 years in out-of-home care in WA, despite being only 6.7% of their age cohort.
- An Indigenous child aged 0-4 in WA is 19.3 times more likely to be in out-of-home care than a non-Indigenous child, compared to a national over-representation rate of 10.9.
- There are number of factors driving disproportionate numbers of First Nations children in child protection systems around the world.
- These are often complex and inter-related and include higher rates of poverty and social exclusion; unrecognised systemic racism; cultural differences in child-rearing practices and extended family responsibilities and a lack of cultural awareness of mandated reporters and welfare professionals.
- The impacts of inter-generational trauma associated with previous child removal policies including a lack of exposure to child-rearing skills and parents and carers who were themselves were victims of abuse also contribute to a cycle of disadvantage and greater likelihood of engagement in child protection systems.

Poverty, locational disadvantage and neglect

- Poverty is a key predictor of substantiated child neglect.
- Aboriginal families in Australia are significantly more likely to live in the most disadvantaged areas and to have a child removed for neglect.
- In WA, parental mental health, substance use, assault-related hospital admissions and socioeconomic disadvantage are linked to increased risk of substantiation.
- Aboriginal women experience much higher rates of experiencing assault, substance use and mental health admission, and when these factors are present, are much more likely to have a child removed.

The impact of the Stolen Generations

- Similar patterns of disproportionality of First Nations children in care are found in other former British colonies where assimilationist policies led to the systematic removal and institutionalisation of First Nations children (including Canada and USA).

- Parents and carers who were forcibly separated from their families and raised in institutions show much higher child protection risk factors, including poverty, poor health and mental health, substance use and incarceration rates.

- Evidence from the Western Australian Aboriginal Child Health Survey (2004) shows that over one third of Aboriginal children in WA were living in a household where a carer or that carer's parent had been forcibly separated.

- Aboriginal children whose carers had been forcibly separated from their natural family were more than twice as likely to be at high risk of clinically significant emotional or behavioural difficulties.

- WA had the highest proportion of children removed in the Stolen Generations.

The Way Forward

- Culturally secure and trauma-informed intensive family support services delivered by Aboriginal Community Controlled Organisations (ACCO) can provide a cost effective means of reducing child removal rates and keeping children safe in family, community and culture.

- Victoria, Queensland and NSW have put in place reforms to extend the role of ACCOs in family support services and child protection decision-making and case management.

- WA has committed to trial Aboriginal Family Led Decision Making in 2020 and increase the role of ACCOs in delivering child safety and family support services.

- More work is needed to apply successful Aboriginal procurement policies to the delivery of child and family services, build local organisations and train a local Aboriginal care workforce to achieve these commitments.

INTRODUCTION AND RATIONALE

For many, Western Australia is the best place to be a child. Yet too many children are still growing up in environments that do not allow them to thrive, preventing them from accessing the opportunities they deserve. This report shows that inequality drives a deep divide between Australian children.

This disadvantage starts during pregnancy and extends through toddlerhood and into preschool years, with significant differences in child outcomes being impacted by mental health, language development and early learning, well before formal school commences.

Early childhood has a significant impact on health development that impacts life-long attainment, productivity and wellbeing. Perinatal maternal health and the first year of life after birth play a foundational role in lifelong health. The more we can do to ensure mothers are safe and healthy and reduce key risk factors in pregnancy, the better their start in life.

During toddlerhood, cognitive and emotional development play a foundational role on future mental health and educational attainment. Early childhood education and the opportunity to socialise with other children and adults plays a critical role in setting the foundations for our social competence and sense of belonging. Factors such as socioeconomic status, poverty, attachment, parental warmth, hostile parenting, parental mental health, parental alcoholism, family structure, parental level of education, and parental stress impact on child outcomes across various domains, and are highlighted in this report.

Access to quality early childhood education services remains a challenge for too many children in WA and Australia, with COVID-19 demonstrating the importance of childcare for our frontline workers. As demonstrated by BCEC's new Early Learning Disadvantage Index, children living in the most disadvantaged communities across Australia are far less likely to attend the required 15 hours of preschool and more likely to become developmentally vulnerable in their first five years of life.

Children growing up in poverty face the lifelong impacts that it has on their development, educational success and wellbeing. This BCEC Focus on WA report shows that family poverty is a prevalent issue for families with children under the age of five. In WA alone, child poverty rates have been increasing over time and currently more than one in five children under the age of five are living in poverty.

There are also disproportionate numbers of Aboriginal and Torres Strait Islander children in child protection systems, with an Indigenous child aged between zero and four years old in WA 19.3 times more likely to be in out-of-home care than a non-Indigenous child. Tackling childhood poverty and giving children the best chance to thrive is arguably the most effective investment we can make in the long-term future of our State.

The Early Years: Investing in Our Future highlights the above issues in some detail. Where possible, comparisons are made between WA and other jurisdictions across the nation, with comparisons made too across the regions of WA. In doing so, this report aims to inform policy debates, policy development and service delivery to ensure that WA is, in fact, the best place to raise a child.

In 2019, children aged 0-5 years comprised 7.9% of the WA population

INTRODUCTION

This chapter provides an overview of the number of children in Western Australia (WA), their regional location and the socioeconomic profile of the communities in which they live. It is important that children are looked at in the context of the broader community in which they live. The old adage that 'it takes a village to raise a child' is as pertinent today as it has ever been. Socioeconomic circumstances, family context, regional location and cultural diversity are key determinants of child outcomes, with impacts on physical and mental health, educational outcomes, and child development.

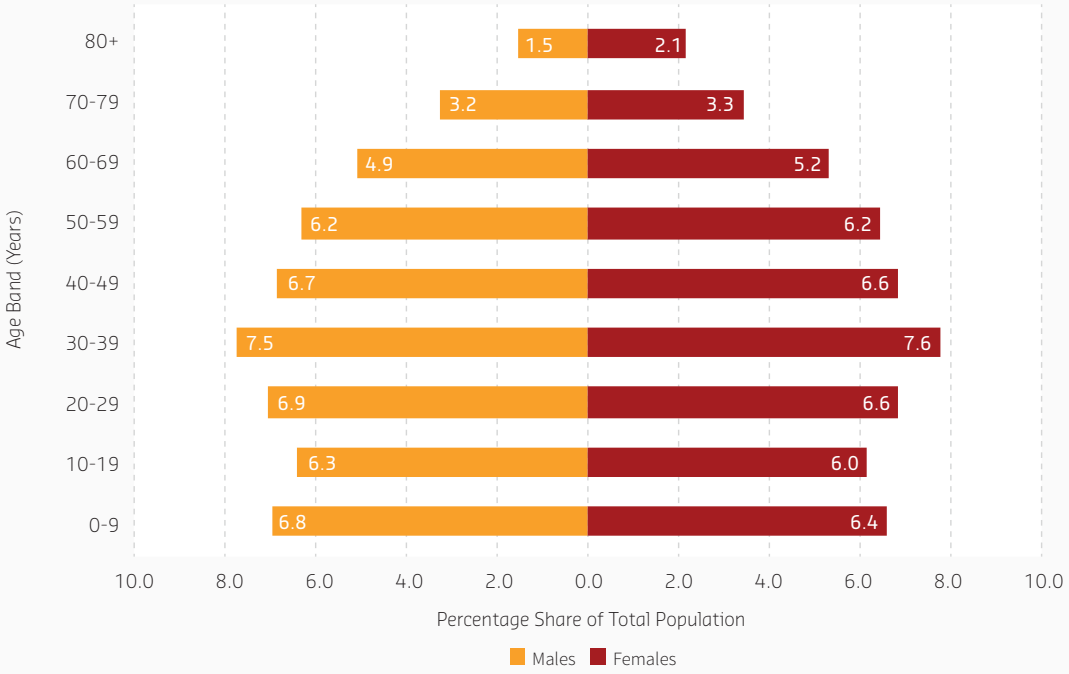
LOCATION OF YOUNG CHILDREN IN WA

Number and Share of Young Children in WA

As of June 2019, WA had an estimated population of 2.62 million people. Children aged 0-19 years of age comprised 25.5% of this population (666,100), with 0-9 year olds making up 13.2% and 0-5 year olds being 7.9% (207,300) of the overall population.

FIGURE 1

Share of Population in WA by age band and gender, June 2019



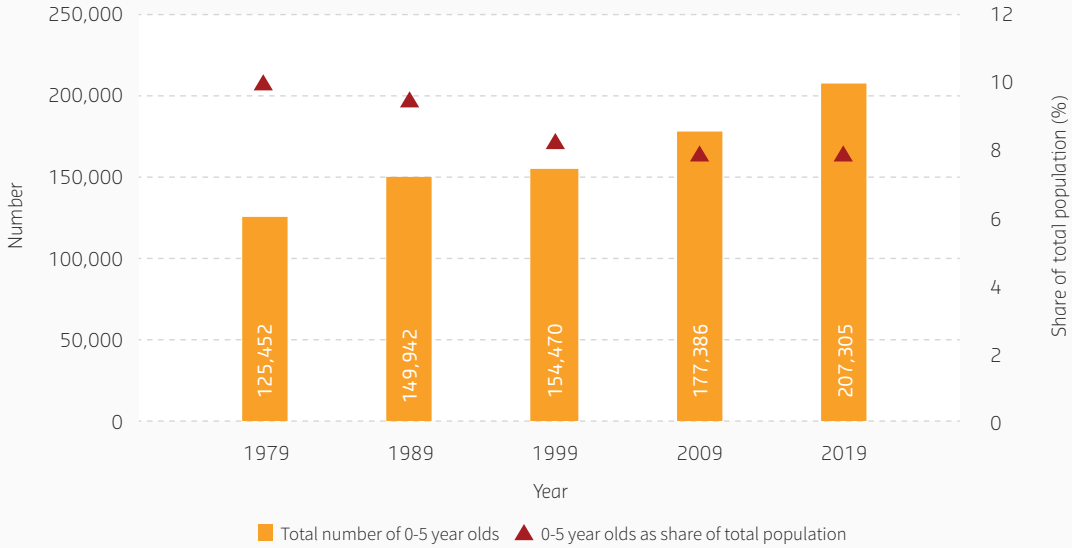
Note: Population estimates. Shares may differ to those reported using Census data.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on ABS Cat 3101.0, December 2019.

The share of 0-5 year olds in WA has declined from 10.1% in 1979 to 7.9% in 2019.

The number of 0-5 years olds in WA has increased over time, from 125,500 in 1979 to 207,300 in 2019 (Figure 2). However, with overall population growth, particularly among the working age cohort through positive net migration, and with longer life expectancy, the share of 0-5 year olds in WA has declined from 10.1% in 1979 to 7.9% in 2019.

FIGURE 2

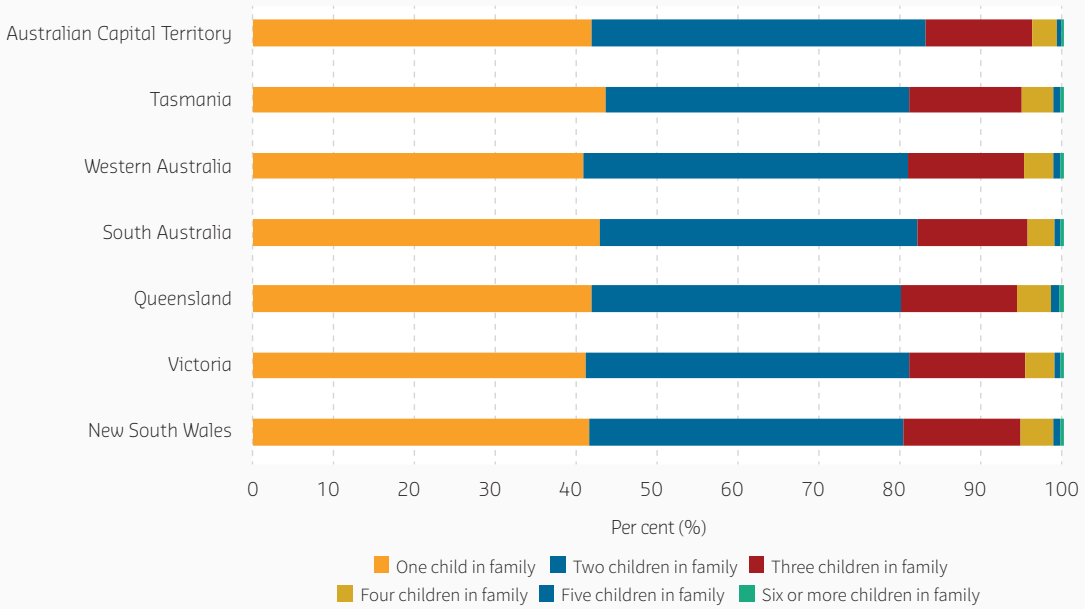
Number and share of 0-5 year old children in WA, 1979 to 2019



Note: Population estimates. Shares may differ to those reported using Census data.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on ABS Cat 3101.0, December 2019.

FIGURE 3

Family size, by state, 2016



Source: Bankwest Curtin Economics Centre | Authors' calculations based on ABS Census of Population and Housing, 2011 and 2016

40% of families with children in WA are one child families. A further 40% of families have two children.

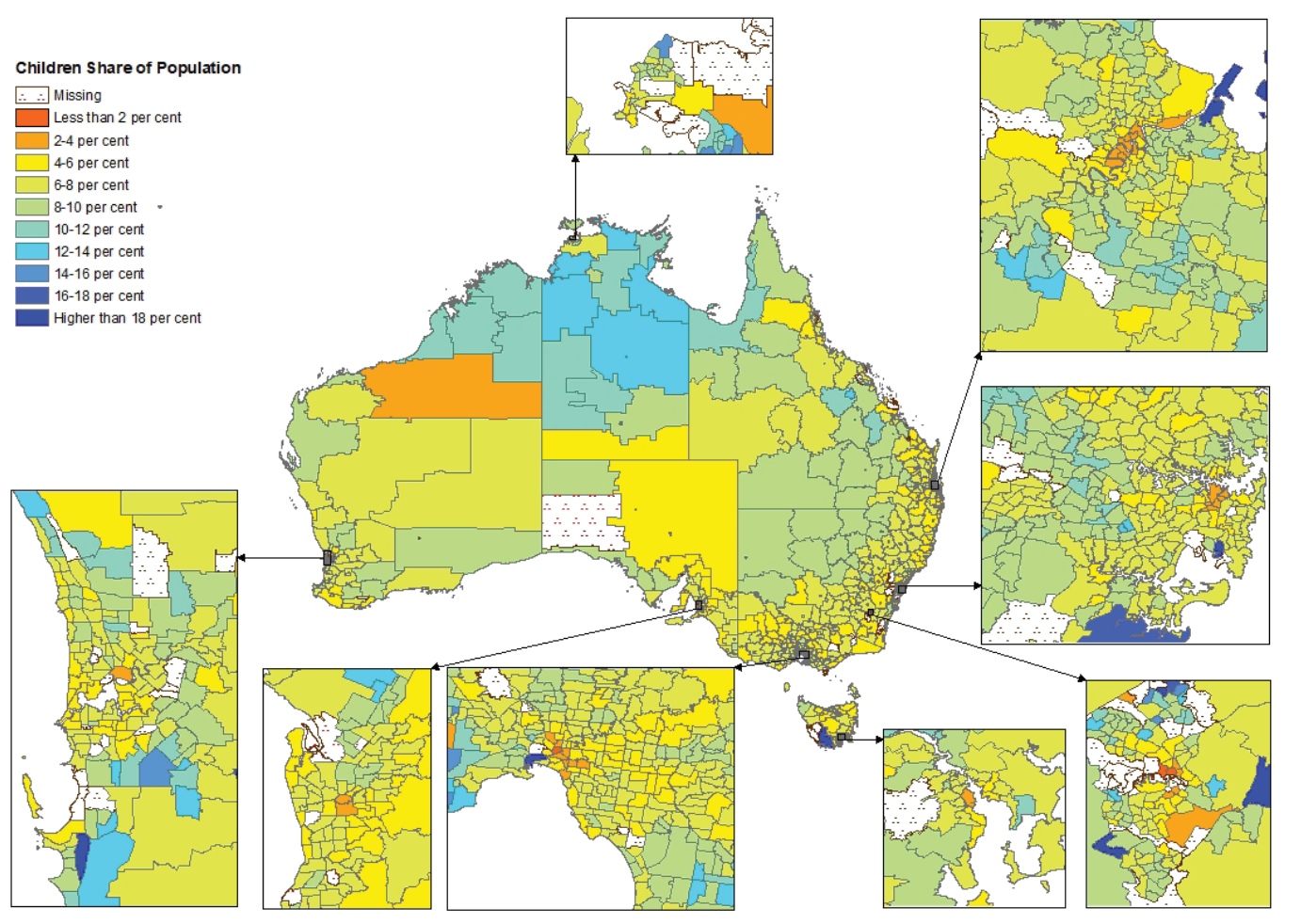
This too relates to the changing nature of family size. As demonstrated by the 2016 Census (Figure 3), over 40% of families with children in WA are single child families, with a further 40% of families with children having two children in the family. Only 15% of families with children have three children, with approximately 5% having four of more children in the family.

Naturally, by count, the largest number of 0-5 year olds are observed in more densely populated areas. However, looking at population shares paints a different picture. As shown in Figure 4, children aged 0-5 years comprise a large share of the overall population in the Northern Territory and Kimberley region of WA, with shares ranging between 10% and 14% for many areas within those regions. The latter regions do have an overall higher proportion of Indigenous populations, who in turn tend to have larger families to the non-Indigenous population.

Looking more closely at the Greater Perth area (Figure 4) shows that there are greater shares of children in the northern and southern growth corridors, with areas such as the City of Wanneroo and City of Swan (including Ellenbrook) to the north and, City of Rockingham (including Baldivis) and City of Armadale (including Forrestdale) to the south of the river. One factor at play here is housing affordability, with many younger families moving to these outer metropolitan regions (see for example, Duncan, James and Rowley, 2019).

FIGURE 4

0-5 year old children as a share of total population, Australia by SA2 region, 2016



Note: ABS Census data are presented for place of residence.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on ABS Census of Population and Housing, 2016.

Composition of 'The Village'
Here a more detailed examination of the socioeconomic and cultural composition of the communities in which young children live in WA is provided. Families with multiple adversities are more at risk of poorer outcomes for their children, with such adversities also impacting on parental availability and resilience. The twenty five SA2 regions with the largest number of 0-5 year olds in 2016 are presented (Table 1). Together, these SA2 regions made up almost 28% of 0-5 year olds across WA in 2016.

Ellenbrook in the City of Swan, reported over 4,100 0-5 year olds in 2016, the highest number for an SA2 region across the State. This was followed by Baldivis (City of Rockingham), and Forrestdale - Harrisdale - Piara Waters (City of Armadale) and Madeley - Darch - Landsdale (City of Wanneroo). All four of these SA2 regions have a Socio-Economic Indexes for Areas (SEIFA) score of 6 or above, denoting lower than average levels of socioeconomic disadvantage.

Five of the top twenty five areas reported in Table 1 have a SEIFA score lower than 5, including Butler-Merriwa-Ridgewood, Balga-Mirrabooka, Riverdale-Kewdale-Cloverdale, Armadale-Wungong-Brookdale, Gosnells, Thornlie and Busselton. SEIFA scores are developed using other socioeconomic variables, so these SA2 regions also typically display higher levels of unemployment, a higher number of people not in the labour force, lower educational levels and lower median income levels.

Previous research provided an in-depth analysis of the Perinatal and Infant Mental Health (PIMH) system of care for the City of Wanneroo and City of Joondalup that highlighted that, in many cases, critical family service delivery such as GP and Pharmacy services are not keeping pace with the population growth of young families (Priddis, Matacz, Kiely *et al*., 2019). The latter services are often seen as the first point of call for pregnant women and families with babies and young children.

Ellenbrook in the City of Swan, reported over 4,100 0-5 year olds in 2016, the highest number for an SA2 region across the State.

Critical family service delivery such as GP and Pharmacy services are not keeping pace with the population growth of young families.

TABLE 1

Socioeconomic indicators of SA2 regions with highest number of 0-5 year olds, WA, 2016

	0-5 year olds	Total Population	0-5 Yr olds share of Population	Median Income	University or Higher Degree (20-59 years old)	Unemployed	Not in the Labor Force/Labor Force	Part-time/labour force	SEIFA Score
SA2 (UR)	No.	No.	%	$	%	%	%	%	Index
Ellenbrook	4,128	33,852	12.2	56,022	18.8	6.6	16.6	23.8	6
Baldivis	3,984	30,304	13.1	58,398	16.6	6.7	17.1	23.1	7
Forrestdale - Harrisdale - Piara Waters	2,679	18,606	14.4	59,131	35.4	6.4	14.5	22.6	9
Madeley - Darch - Landsdale	2,440	24,391	10.0	53,193	27.3	5.5	15.8	26.9	9
Butler - Merriwa - Ridgewood	2,432	21,205	11.5	48,218	15.1	8.7	20.9	25.9	3
Wanneroo	2,289	24,289	9.4	51,469	21.2	6.4	16.2	27.3	6
Byford	2,037	15,208	13.4	56,419	14.9	6.4	16.9	23.6	6
Balga - Mirrabooka	2,023	18,284	11.1	42,386	18.5	12.2	34.3	29.1	1
Canning Vale - East	1,954	22,210	8.8	50,763	36.2	7.1	27.6	26.5	8
Singleton - Golden Bay - Secret Harbour	1,953	18,455	10.6	57,498	17.2	7.2	17.0	25.6	7
Rivervale - Kewdale - Cloverdale	1,944	22,621	8.6	50,049	32.0	8.6	22.0	25.0	4
Banjup	1,930	16,788	11.5	56,342	31.9	5.3	14.3	27.0	9
Karratha	1,914	13,866	13.8	77,538	20.1	5.0	15.1	17.4	7
Huntingdale - Southern River	1,907	18,271	10.4	52,937	25.8	6.9	19.2	26.2	7
Armadale - Wungong - Brookdale	1,883	17,185	11.0	47,802	12.6	12.5	31.9	24.3	1
Success - Hammond Park	1,840	14,000	13.1	57,010	31.5	6.3	15.1	24.2	9
Bertram - Wellard (West)	1,827	13,242	13.8	56,209	27.5	8.3	17.4	23.0	6
Carramar	1,803	15,736	11.5	53,249	20.2	6.7	15.6	25.8	7
Bayswater - Embleton - Bedford	1,800	21,571	8.3	55,551	38.4	6.5	15.8	26.5	7
Gosnells	1,799	18,467	9.7	46,794	14.3	10.9	30.5	24.7	1
Thornlie	1,786	22,035	8.1	47,491	22.0	8.6	22.6	27.6	4
Busselton	1,772	24,423	7.3	41,979	16.6	5.7	20.4	32.9	3
Cannington - Queens Park	1,700	16,824	10.1	42,304	36.7	10.5	26.7	29.9	5
Forrestfield - Wattle Grove	1,685	17,573	9.6	53,364	20.6	6.7	18.0	23.9	5
Karrinyup - Gwelup - Carine	1,682	19,350	8.7	57,892	45.0	4.9	13.4	30.3	10
WA	**191,390**	**2,290,555**	**8.4**	**52,504**	**28.1**	**7.1**	**20.4**	**26.7**	

Notes: Place of residence. Top 25 SA2 regions by number of 0-5 year olds reported. WA shares differ to those reported using more recent population estimates data. Socio-Economic Indexes for Areas (SEIFA) is a product developed by the ABS that ranks areas in Australia according to relative socioeconomic advantage and disadvantage. The Index of Relative Socio-Economic Disadvantage (IRSD) is used. A SEIFA score of 1 denotes the lowest scoring 10% of areas, that is, areas with the highest level of relative socioeconomic disadvantage, with 10 denoted an SA2 that falls into the 10% of areas with the lowest level of disadvantage.

Source: Bankwest Curtin Economics Centre | Authors' calculations based on ABS Census of Population and Housing, 2011 and 2016.

Table 2 again displays the twenty five SA2 regions with the highest number of 0-5 year olds in WA. This table focuses on the issue of cultural diversity, with a focus on place of birth. Across WA, 65.2% of the overall population were born in Australia, with 14.8% born in Europe, 11.5% in Asia, 3.7% in Africa and 1.2% in the Americas.

For many of the SA2 regions with a low SEIFA score, we often also see a high immigrant population, with a high proportion of immigrants too from non-European regions of origin. For example, in Balga-Mirrabooka only 46% of the population are Australian born, with 28.9% born in Asian, and 9.9% in African countries. Sixteen of the top 25 SA2 regions reported

have a larger share of African migrants relative to the WA average (3.7%), with 14 of the 25 regions having a greater share of Asian born individuals relative to the WA average (11.5%).

Priddis, *et al.* (2019) highlighted cultural, language and religious diversity across the Cities of Joondalup and Wanneroo and demonstrated that many migrant women of birthing age had no or very poor levels of the English language. This can provide a significant barrier to accessing services and further highlights the importance of 'place-based' service delivery. Priddis, *et al.* (2019) also found that there was a lack of cultural diversity in the PIMH workforce, and that further work was needed to ensure appropriate awareness of the individual needs of the communities in which services are delivered to ensure culturally appropriate service delivery, and appropriate engagement with vulnerable communities.

Balga-Mirrabooka only 46% of the population are Australian born, with 28.9% born in Asian, and 9.9% in African countries.

TABLE 2

Cultural diversity with SA2 regions with highest number of 0-5 year old children, WA, 2016

	0-5 year olds	Total Population	Australia-born	Indigenous	Region of Origin of Migrants				SEIFA Score
					Europe	Asia	Americas	Africa	
SA2 (UR)	No.	No.	Share of Pop (%)						Index
Ellenbrook	4,128	33,852	64.4	2.6	11.9	10.4	0.9	6.5	6
Baldivis	3,984	30,304	64.7	1.6	17.7	4.3	1.1	4.9	7
Forrestdale - Harrisdale - Piara Waters	2,679	18,606	51.6	0.7	9.7	26.5	1.3	7.2	9
Madeley - Darch - Landsdale	2,440	24,391	59.9	0.5	13.8	14.7	1.1	7.7	9
Butler - Merriwa - Ridgewood	2,432	21,205	55.9	2.2	23.7	5.4	1.0	7.5	3
Wanneroo	2,289	24,289	61.7	1.2	20.0	7.8	0.8	5.3	6
Byford	2,037	15,208	70.6	2.4	12.6	6.9	0.6	4.6	6
Balga - Mirrabooka	2,023	18,284	46.2	3.5	10.8	28.9	1.0	9.9	1
Canning Vale - East	1,954	22,210	47.2	1.8	9.7	33.4	0.9	5.6	8
Singleton - Golden Bay - Secret Harbour	1,953	18,455	65.5	1.5	23.7	1.8	0.9	3.2	7
Rivervale - Kewdale - Cloverdale	1,944	22,621	52.8	2.9	10.9	26.9	1.1	3.9	4
Banjup	1,930	16,788	63.6	1.3	13.0	15.0	1.1	3.6	9
Karratha	1,914	13,866	75.0	11.6	6.5	8.6	0.9	2.7	7
Huntingdale - Southern River	1,907	18,271	56.1	1.4	10.5	22.9	0.7	5.9	7
Armadale - Wungong - Brookdale	1,883	17,185	67.4	5.2	13.5	9.9	0.8	3.7	1
Success - Hammond Park	1,840	14,000	57.3	1.2	12.2	19.4	1.8	4.8	9
Bertram - Wellard (West)	1,827	13,242	55.2	2.1	9.3	22.0	1.2	5.4	6
Carramar	1,803	15,736	53.2	1.3	23.9	9.2	0.7	8.1	7
Bayswater - Embleton - Bedford	1,800	21,571	64.7	1.9	14.6	13.5	1.4	2.4	7
Gosnells	1,799	18,467	61.9	4.0	12.2	17.9	0.5	2.9	1
Thornlie	1,786	22,035	56.4	2.0	12.4	22.9	0.7	3.3	4
Busselton	1,772	24,423	80.5	2.1	11.8	2.7	0.6	1.6	3
Cannington - Queens Park	1,700	16,824	38.3	1.4	6.7	46.0	0.8	5.4	5
Forrestfield - Wattle Grove	1,685	17,573	65.4	2.5	10.4	15.5	0.5	3.1	5
Karrinyup - Gwelup - Carine	1,682	19,350	71.0	0.5	15.5	5.6	1.5	4.0	10
WA	**191,390**	**2,290,555**	**65.2**	**28.3**	**14.8**	**11.5**	**1.2**	**3.7**	

Notes: Place of residence. Top 25 SA2 regions by number of 0-5 year olds reported. WA shares differ to those reported using more recent population estimates data.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on ABS Census of Population and Housing, 2011 and 2016.

"THE TOTAL FERTILITY RATE FOR WOMEN IN WA DECLINED FROM A PEAK OF 2.10 CHILDREN PER WOMAN IN 2008 TO 1.76 CHILDREN PER WOMAN IN 2018."

FROM PREGNANCY TO AGE ONE

INTRODUCTION

This chapter provides an overview of some of the critical issues relating to the health and wellbeing of mothers during pregnancy, including those behaviours that are risky to the development of the baby. Measures reported on include fertility rates, attendance at antenatal visits, hospitalisation during pregnancy as a result of diabetes, risky behaviours including smoking and alcohol consumption during pregnancy, and the change in the rate of caesarean sections. Due to data limitations, the area of mental health in young mothers and their babies is not addressed here, but the topic of mental health in toddlerhood is discussed in some detail in the next chapter of this report. The chapter also looks at some of the early measure of infant health, such as birth weight and immunisation rates.

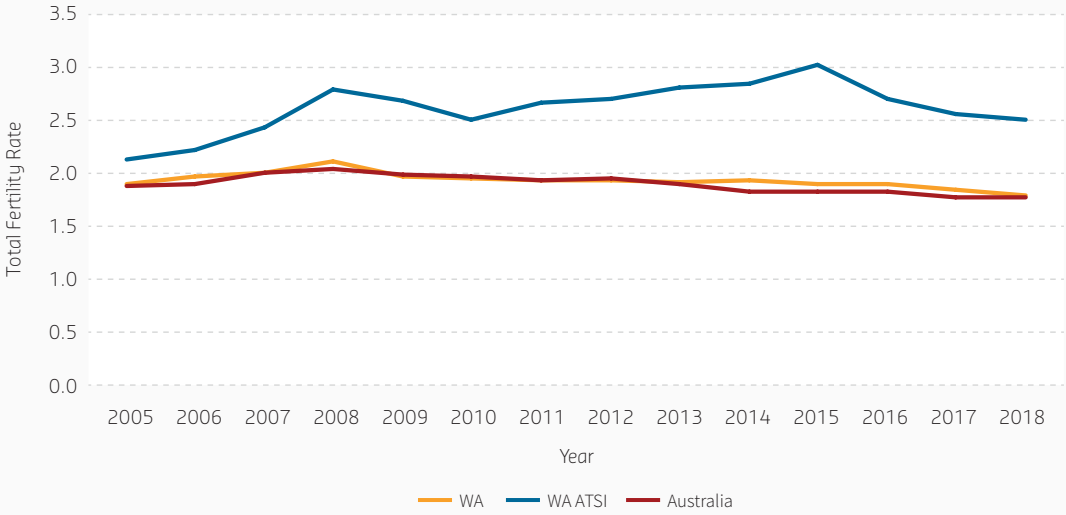
FERTILITY RATES AND NUMBER OF PREGNANT WOMEN IN WA

The 2019 Women's Report Card (Cassells, Kiely et al., 2019) provides a detailed insight into the lives of women in WA, with a key pillar focusing on the health and wellbeing of women. It provides some detail on the sexual, reproductive and maternal health of women, including fertility and pregnancy rates, teenage birth rates, age of mothers giving birth and births by caesarean section, amongst others. Some of these factors are updated here, with an additional regional breakdown for WA provided where possible.

The total fertility rate (TFR) for women in WA declined from a peak of 2.10 children per woman in 2008 to 1.76 children per woman in 2018, the lowest rate reported over the years from 2005 reported here (Figure 5). The trend was similar for Australia, with the total fertility rate declining from 2.02 in 2008 to 1.74 in 2018. The TFR for Aboriginal and Torres Strait Islander (ATSI) women remains much higher, standing at 2.51 in 2018, but down from a peak of 3.04 in 2015.

FIGURE 5

Fertility rates, WA and Australia, 2005 to 2018



Note: The Australian Bureau of Statistics (ABS) defines the total fertility rate as representing the number of children a woman would bear during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on ABS Cat 3301, 2018.

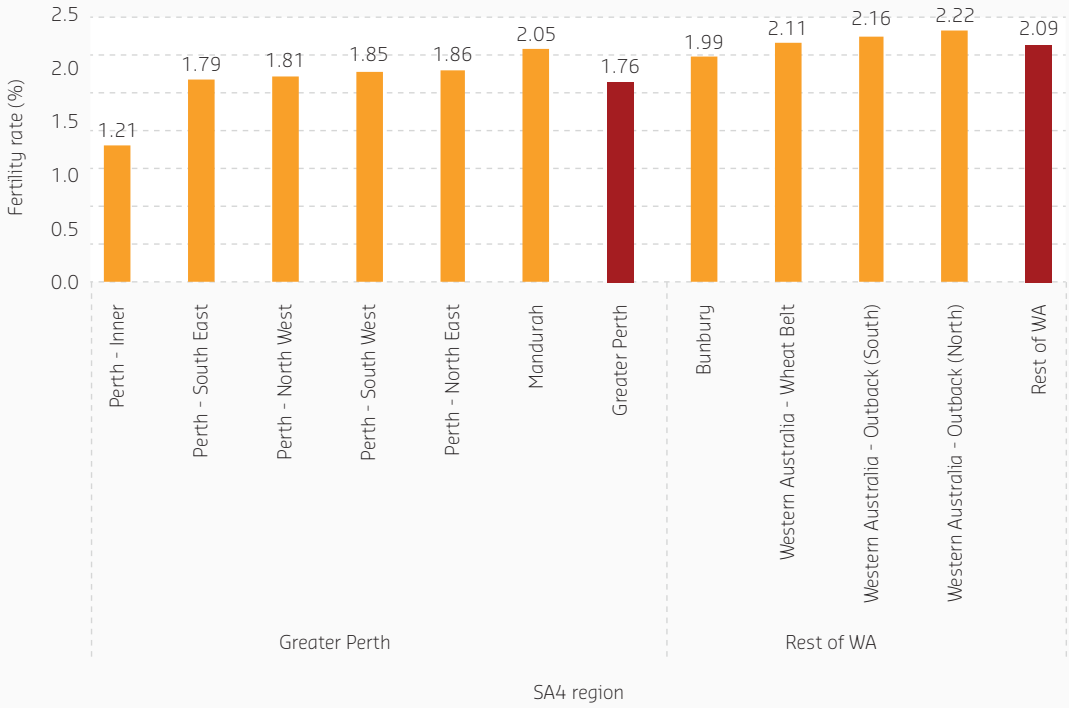
The Greater Perth region had a total fertility rate of 1.76 in 2018, compared to 2.09 for the Rest of WA.

Taking a closer look at the TFR across WA by region (Figure 6) shows a TFR of 1.76 in the Greater Perth region compared to 2.09 for the Rest of WA. For the Greater Perth region, the highest TFR by SA4 region was in Mandurah (2.05) with the lowest in Perth-Inner (1.21). The TRF across all of the Rest of WA regional and remote areas were (with the exception of Bunbury relative to Mandurah) higher than Greater Perth, with the highest reported from the WA Outback North SA4 region.

In 2018, the largest number of pregnant women by SA3 region (Figure 7) in WA occurred in the high population growth areas, with the highest number of pregnant women observed in the City of Wanneroo, City of Sterling, and City of Swan in the north and north eastern regions of Greater Perth. North of the river too also saw a high number of pregnancies in Bayswater-Bassendean, and Victoria Park, with similar numbers reported for Gosnells, Armadale, Cockburn and Rockingham south of the river.

FIGURE 6

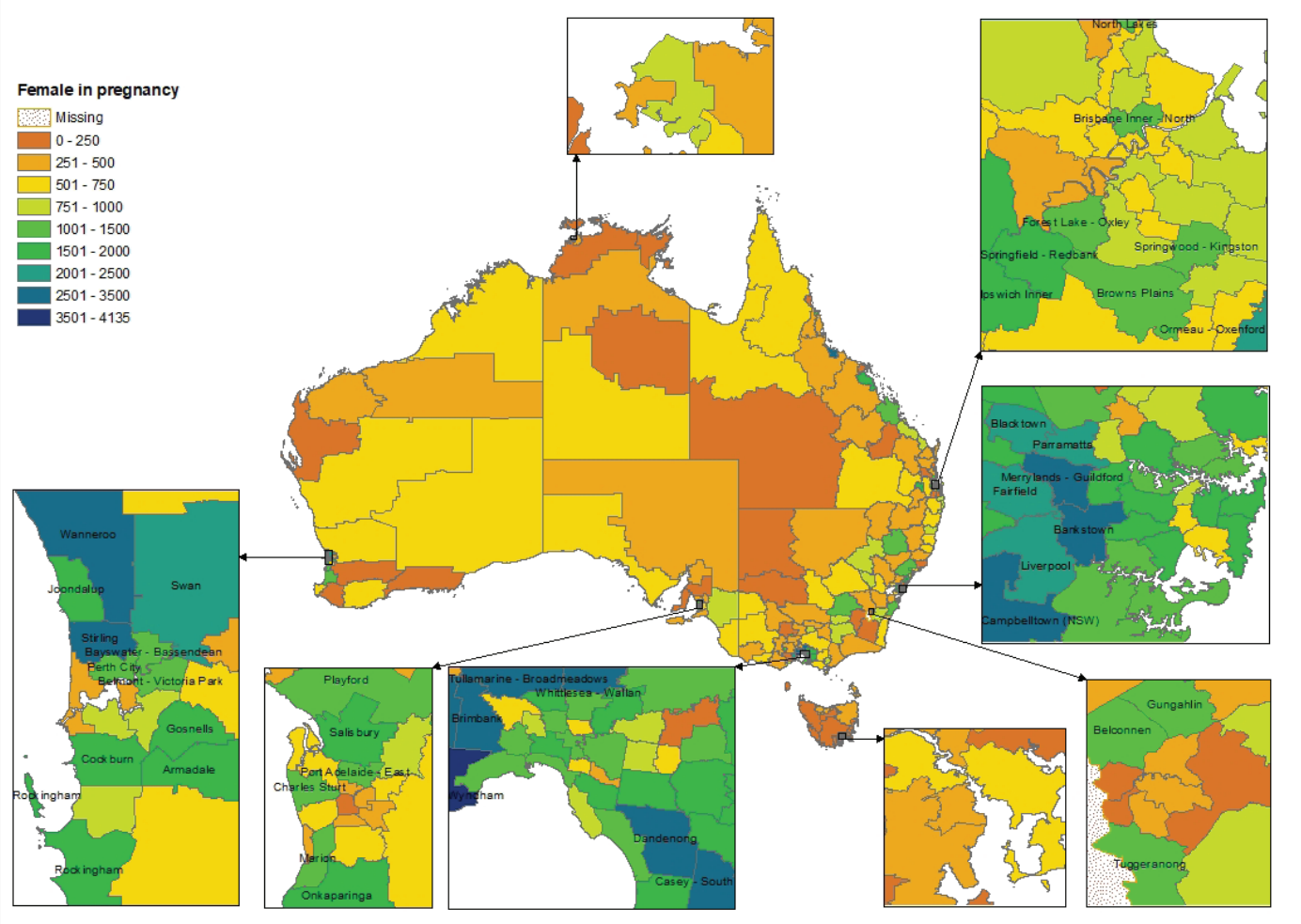
Fertility rates by SA4 region, WA, 2018



Source: Bankwest Curtin Economics Centre | Authors' calculations based on ABS Cat 3301, 2018.

FIGURE 7

Number of Pregnant women by SA3 region, Australia, 2018



Note: Place of residence.

Source: Bankwest Curtin Economics Centre | Authors' calculations based on Australian Institute of Health and Welfare (AIHW) data.

HEALTH DURING PREGNANCY

In 2019, only 63.4% of women attended their first antenatal care visit within the first 14 weeks of pregnancy.

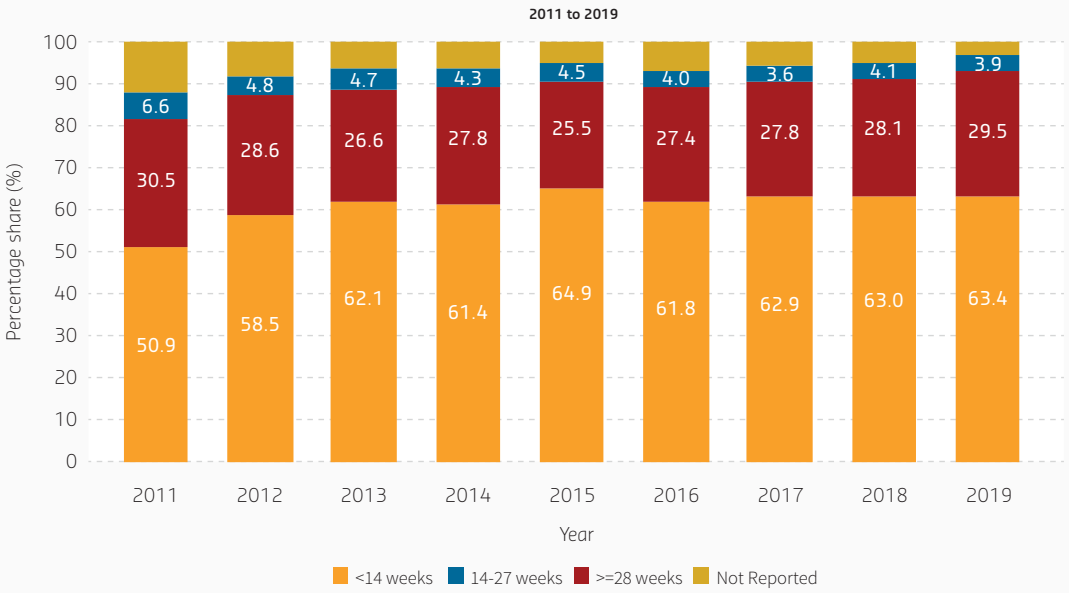
During the period 2013 to 2019, the percentage of women attending their first antenatal care visit within the first 14 weeks of pregnancy has remained stable averaging 61% (Figure 8). This was much lower (50.9%) in 2011.

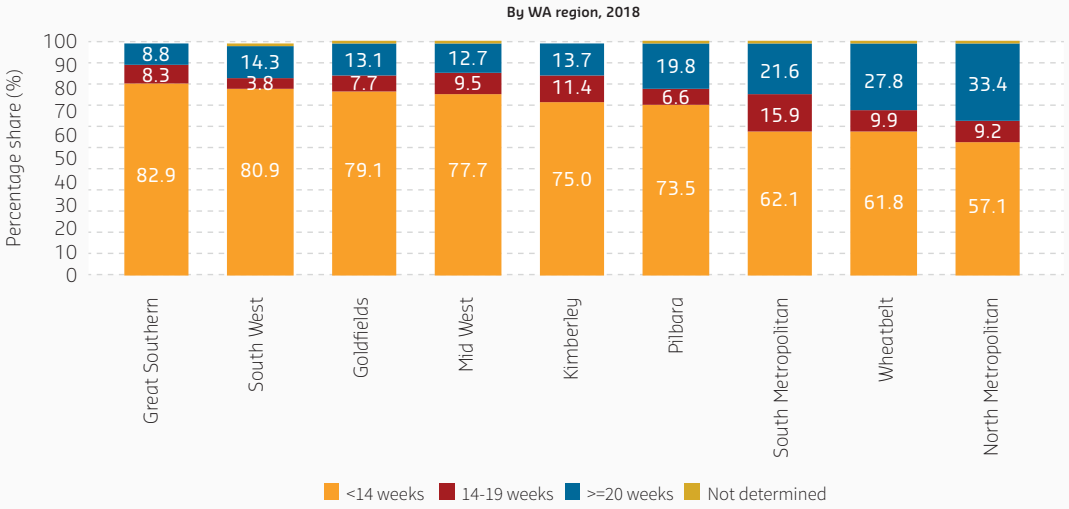
There has been a slight increase in the percentage share of women attending their first antenatal care visit as the pregnancy progresses to the second trimester, from a low of 25.5% in 2015, to 29.5% in 2019. However, most of the gains in the latter have come from a decline in the 'not reported' category. The number of women having their first antenatal care visit at the 28 week or later mark remains at around 4%.

On a regional basis, in 2018, Great Southern reported the greatest percentage of first time antenatal care visits within the first 14 weeks of pregnancy (82.9%), with the lowest rate recorded in the North Metropolitan area (57.1%). In fact, over 33% of women in the North Metropolitan area had their first antenatal care visit only at the 20 weeks or later stage of pregnancy. This figure sat at 28% for the Wheatbelt, 21.6% for South Metropolitan, and 19.8% for the Pilbara. However, this rate was much lower across the remaining WA regions. The Australian Institute of Health and Welfare (AIHW) (2016) noted that women from lower socioeconomic areas, those living in very remote areas, Aboriginal mothers and women born in non-English speaking countries were all less likely to attend the first antenatal care visit in the first trimester. Previous commentary here showed that many of the growth areas in the Greater Perth area displayed a greater proportion of women from Culturally and Linguistically Diverse (CALD) backgrounds. More must be done to support these women in the early stages of pregnancy with access to culturally appropriate services, to ensure there is awareness of the importance of early check-ups.

FIGURE 8

Duration of pregnancy at first antenatal care visit, WA, 2011 to 2019





Note: Birth data for the most recent calendar year are incomplete and subject to change.
Source: Bankwest Curtin Economics Centre | Data from WA Department of Health, Government of WA sources from https://ww2.health.wa.gov.au/Reports-and-publications/Western-Australias-Mothers-and-Babies-summaryinformation/data?report=mns_birth_y and the Commissioner for Children and Young People, WA, sourced here https://www.ccyp.wa.gov.au/our-work/indicators-of-wellbeing/age-group-0-to-5-years/positive-antenatal-environment/.

Across Australia, higher rates of hospitalisation for diabetes are observed in more remote areas, are higher for those women in lower socioeconomic groups, and are almost double the rate for Indigenous women.

When compared to the other states and territories, there were lower rates of hospitalisation for diabetes during pregnancy for WA women with a rate of 569 per 100,000 women relative to an average rate of 751 across the nation (Figure 9). This may be due to differing reporting standards by state, but is also related to inadequate screening services in rural WA (Kirke *et al.*, 2019).

Across Australia, higher rates of hospitalisation for diabetes are observed in more remote areas, are higher for those women in lower socioeconomic groups, and are almost double the rate for Indigenous women. The latter is however in a context that, as reported by Diabetes Australia, ATSI people are almost four times more likely than non-Indigenous Australians to have diabetes or pre-diabetes (Diabetes Australia, 2020).

FIGURE 9

Hospitalisations for diabetes during pregnancy, 2015-16

Note: Number per 100,000 women reported. For socioeconomic groups, Group 1 is the most disadvantaged, with Group 5 being the least disadvantaged. Hospitalisations for diabetes during pregnancy (principal and/or additional diagnosis of ICD-10-AM O24).

Source: Bankwest Curtin Economics Centre | Authors' calculations based on AIHW National Hospital Morbidity Database.

RISKY BEHAVIOUR DURING PREGNANCY

This section reports on two key metrics of risky behaviour during pregnancy – smoking and alcohol consumption. Various research has shown the negative effect such behaviours can have, not only on the mother's health, but more critically on the development of the baby.

There are, of course, other factors that can negatively impact on the development of babies such as drug use and diet. There is also increasing evidence that children in utero are developmentally impacted by family violence. The WA Department of Communities Women's Report Card 2019 (Cassells, Kiely *et al.*, 2019), showed that 34.4% of women in WA reported that partner violence occurred during pregnancy.

The side effects of women smoking during pregnancy, as experienced by their babies, include pre-term delivery, lower birth weights and weaker lungs (Shah & Bracken, 2000). Table 3 shows the levels of reported smoking during pregnancy (first 20 weeks of pregnancy and second 20 weeks of pregnancy) by SA3 regions in WA in 2019. Regions are ranked according to the percentage share of respondents that reported smoking in the first 20 weeks of pregnancy.

Interestingly, the ten regions with the highest smoking rates during pregnancy are outside of metropolitan Perth, and present in regional and remote areas of WA, with the ten regions with the lowest shares of reported smoking in the first 20 weeks of pregnancy evident within the greater Perth region. The Kimberley reports particularly high rates of smoking amongst pregnant women in the first 20 week, standing at 35%. This does decline by 2.8ppts in the second 20 weeks of pregnancy, but remains at over 32%. The Kimberley is followed by the Mid West, Goldfields, and Gascoyne, with Wheatbelt-north rounding off the top five. This data suggests that more needs to be done to inform pregnant women, particularly in these regions of the negative impacts of smoking during pregnancy and for additional supports to be put in place to help them to quit while pregnant.

The ten SA3 regions with the highest smoking rates during pregnancy present in regional and remote areas of WA, with the highest rate in the Kimberley (35%), and the Mid West, Goldfields, Gascoyne and Wheatbelt-north making up the top five.

The Kimberley reports particularly high rates of smoking amongst pregnant women in the first 20 week, standing at 35%.

TABLE 3

Reported smoking during pregnancy, by SA3 region, WA, 2019

	Reported smoking tobacco in the first 20 weeks of pregnancy		Reported smoking tobacco after the first 20 weeks of pregnancy		Change between first and second 20 weeks of pregnancy	The total number of women who gave birth with a stated smoking status.
SA3 Region	No.	Share (%)	No.	Share (%)	Ppt change	No.
Kimberley	698	35.1	642	32.3	-2.79	1,987
Mid West	429	19.6	405	18.5	-1.09	2,188
Goldfields	404	18.9	373	17.5	-1.45	2,138
Gascoyne	70	17.3	56	13.9	-3.44	404
Wheat Belt - North	303	16.8	276	15.3	-1.47	1,800
Wheat Belt - South	133	15.4	117	13.6	-1.81	861
Albany	302	14.7	266	12.9	-1.78	2,059
Bunbury	631	14.6	523	12.1	-2.51	4,325
Esperance	86	14.4	80	13.4	-1.00	597
East Pilbara	176	14.3	150	12.2	-2.14	1,234
Mandurah	482	13.9	446	12.9	-1.04	3,468
West Pilbara	206	13.9	169	11.5	-2.45	1,476
Manjimup	82	12.4	66	10.0	-2.45	663
Kwinana	266	12.4	235	10.9	-1.46	2,149
Rockingham	629	11.3	546	9.8	-1.48	5,562
Armadale	499	11.0	422	9.3	-1.70	4,540
Mundaring	123	9.4	107	8.2	-1.19	1,303
Gosnells	512	9.3	432	7.8	-1.50	5,535
Serpentine - Jarrahdale	121	8.7	100	7.2	-1.47	1,384
Swan	526	8.6	470	7.7	-0.87	6,082
Kalamunda	154	7.5	130	6.3	-1.19	2,059
Wanneroo	669	7.4	625	6.9	-0.53	9,093
Augusta - Margaret River - Busselton	125	7.1	100	5.7	-1.44	1,767
Cockburn	324	6.8	268	5.6	-1.20	4,789
Belmont - Victoria Park	198	6.1	165	5.1	-0.99	3,232
Bayswater - Bassendean	198	5.6	155	4.4	-1.24	3,554
Fremantle	69	5.3	57	4.3	-0.96	1,314
Stirling	429	4.9	345	4.0	-0.94	8,722
Canning	155	4.7	122	3.7	-1.03	3,326
Joondalup	195	3.8	178	3.5	-0.33	5,129
South Perth	40	2.8	34	2.4	-0.40	1,418
Melville	83	2.7	63	2.0	-0.66	3,081
Perth City	69	1.9	51	1.4	-0.50	3,651
Cottesloe - Claremont	12	0.7	11	0.7	-0.03	1,631
WA	**9,398**	**9.2**	**8,185**	**8.0**	**-1.18**	**102,521**

Notes: Sorted by percentage share during first.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on AIHW analysis of National Perinatal Data Collection.

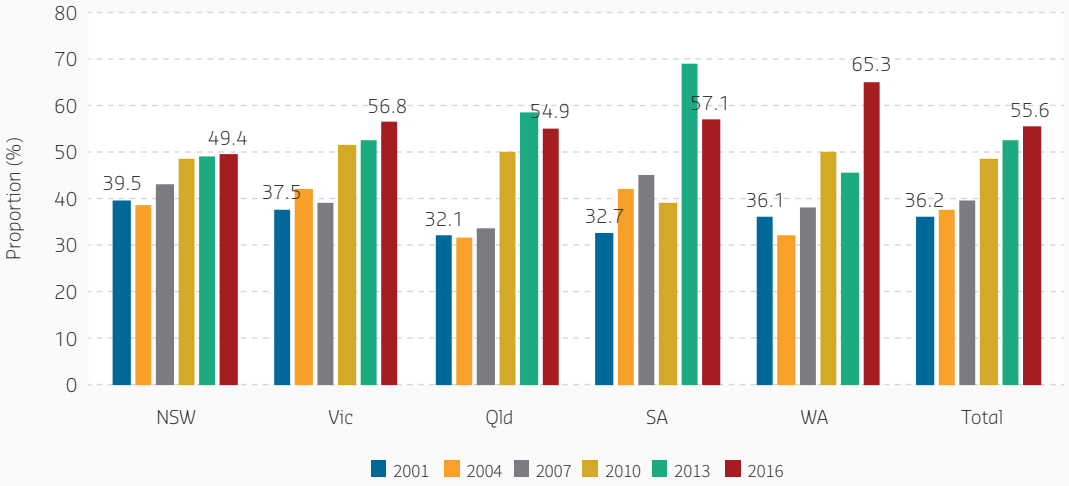
Women who drink alcohol during their pregnancy can increase the risk of their child being born with Foetal Alcohol Syndrome Disorder (FASD). These children experience a range of cognitive, behavioural and physical impairments, characterised by impaired growth, abnormal structure and function of the central nervous system, behavioural difficulties and poor social skills (Oei, 2020). Some critical work in this area is being undertaken by the Telethon Kids Institute (TKI) in Perth.

Figure 10 shows that there has been a significant increase in the number of women who drank no alcohol during pregnancy in Australia, moving from 36.2% in 2001 to 55.6% some fifteen years later in 2016. This has been driven by increased awareness and education programs relating to the negative impacts of consuming alcohol during pregnancy.

The rate is best in WA with over 65% of women declaring that they drank no alcohol while pregnant in 2016. This is followed by SA (57.1%), VIC (56.8%), and QLD (54.9%), with NSW reporting the lowest rate (49.4%).

FIGURE 10

Proportion of women aged 14 to 49 years who drank no alcohol while pregnant, by state, 2001 to 2016



Note: Statistically significant change between 2013 and 2016 for WA.
Source: Bankwest Curtin Economics Centre | Reproduced from Commissioner for Children and Young People WA Indicators of Wellbeing data. Chart is based on a custom report provided to the CCYP by AIHW from NDSHS data –Retrieved from https://www.ccyp.wa.gov.au/.

BIRTHS AND EARLY INFANT HEALTH

As the WA economy experienced strong growth, so too did the birth rate per 1,000 of the population .

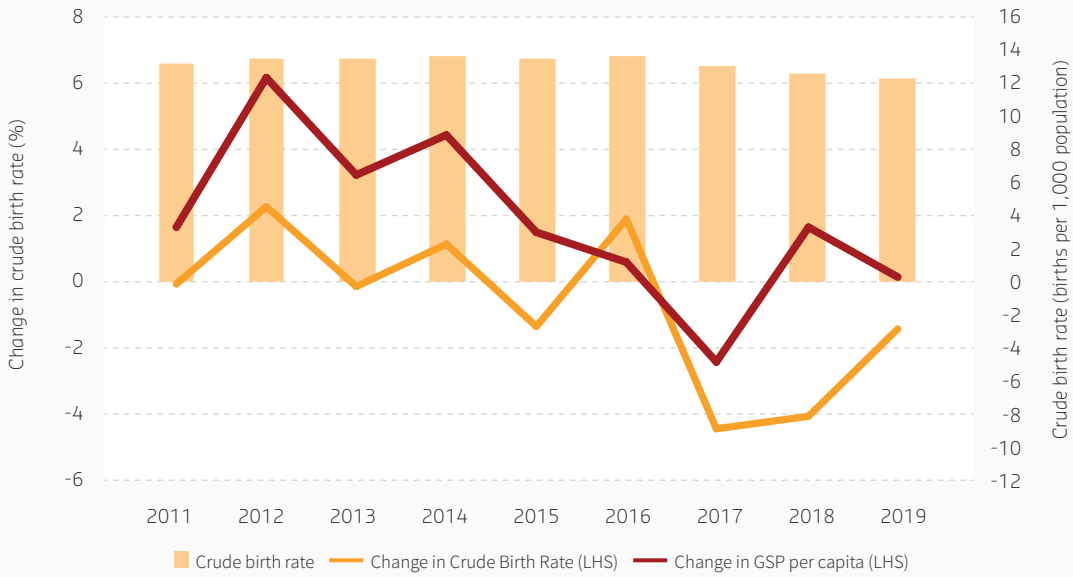
The number of live births in WA increased 31,040 in 2010 to 33,150 in 2019. As the WA economy experienced strong growth, so too did the birth rate per 1,000 of the population – the crude birth rate (Figure 11). For example, over the period reported here, economic growth peaked in 2012, with a 6.3% growth in GSP per capita, and in conjunction with this, the crude birth rate increased by 2.3%. In addition to the construction phase of the mining boom attracting additional migrants to WA, many of who would have been of birthing age, additional financial security may have encouraged family decisions to have more children.

As WA moved from the construction phase to the production phase of the mining boom, coupled with a weakening international economy, economic conditions in WA deteriorated. Over that period, we also see a decline in the crude birth rate. As the unemployment rate increased, population growth has slowed, which is reflected in the declining birth rate per 1,000 of the population. This is most evident in 2017, with both GSP per capita and crude birth rates recording negative growth. Birth rates in 2018 and 2019 remained negative, with weak economic conditions and related uncertainties continuing.

Other social and economic factors too are at play in terms of effecting birth rates, with for example, the Federal Government Baby Bonus Scheme introduced by the Howard Government in 2004, abolished in the 2013-14 Labour Government Budget (and replaced with Family Tax Benefit Schedule A), likely to have played some role (see for example, Drago *et al*., 2011).

FIGURE 11

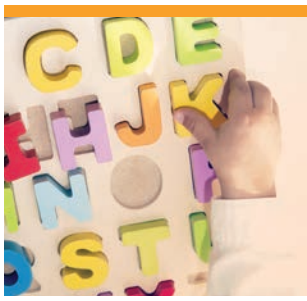
Live births in WA and growth in GSP per capita, WA, 2011 to 2019



Note: Birth data is calendar year. GSP is financial year. Birth data for the most recent calendar year are incomplete and subject to change. Crude birth rate is the number of births per 1,000 of the population.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on ABS cat 5220 and WA Department of Health, Government of WA sources from https://ww2.health.wa.gov.au/Reports-and-publications/Western-Australias-Mothers-and-Babies-summary-information/data?report=mns_birth_y

The number of Indigenous women giving birth increased as a share of total births between 2015 (4.3%) and 2018 (4.6%) nationally (Figure 12), and was evident across all states and territories bar the Tasmania, which saw a slight decline. This increase in the statistics may be attributed to more women identifying as Indigenous.

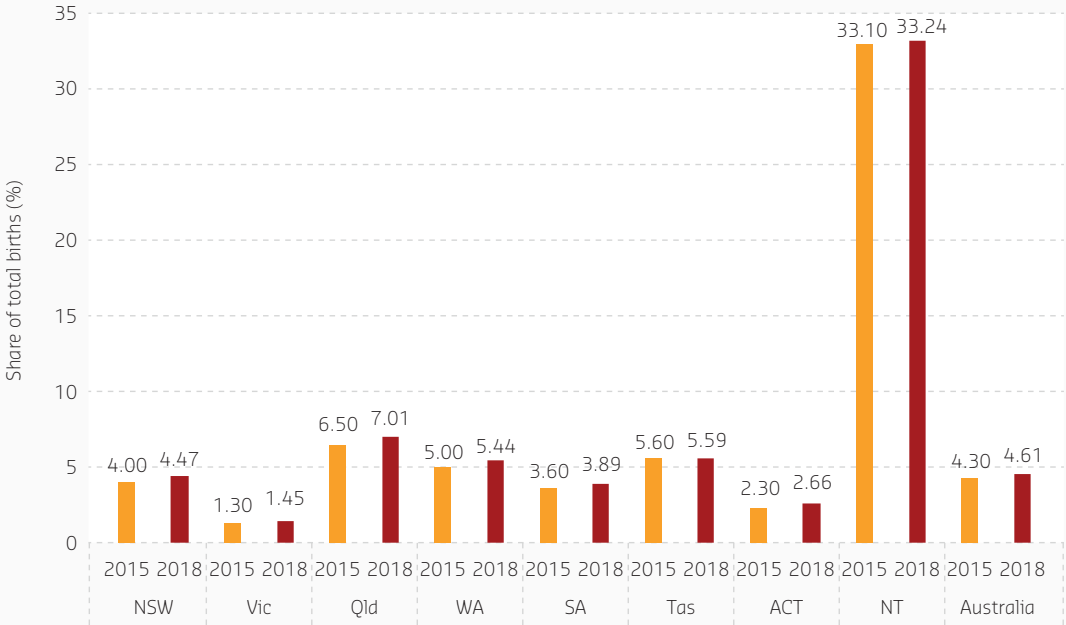
The large share reported for NT aligns with the overall size of the Indigenous population in the territory. In WA, the rate of Indigenous women giving birth as a share of the total number of women giving birth increased from 5.0% in 2015, to 5.4% in 2018.



In WA, the rate of Indigenous women giving birth as a share of the total number of women giving birth increased from 5.0% in 2015, to 5.4% in 2018.

FIGURE 12

Indigenous women who gave birth, as a share of total births, 2015 and 2018



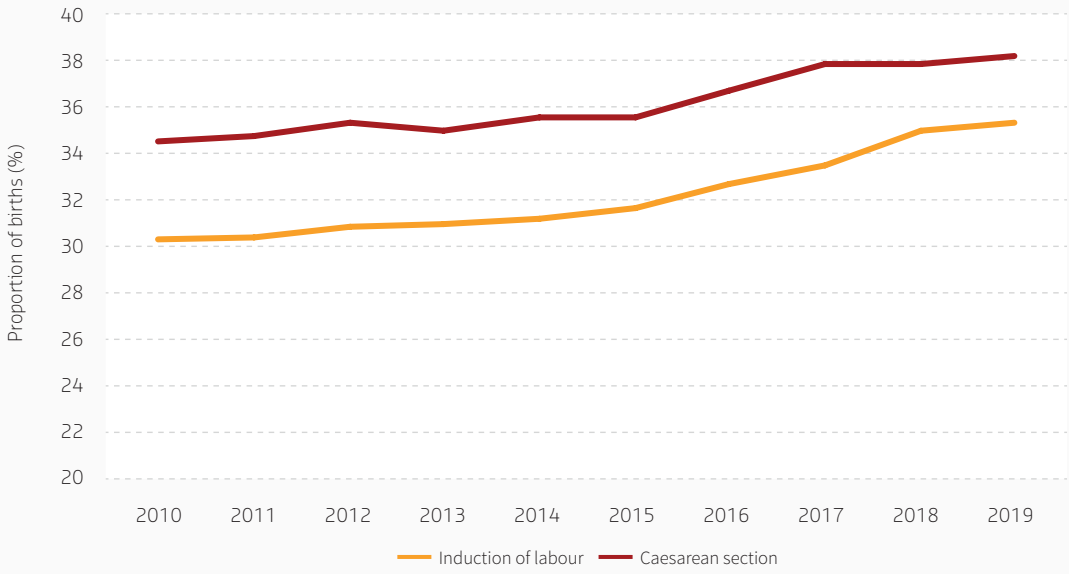
Note: Care must therefore be taken when comparing percentages across jurisdictions. For example, 24.8% of Aboriginal and/or Torres Strait Islander women who gave birth in the ACT in 2015 were non-ACT residents.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on AIHW analysis of National Perinatal Data Collection.

In WA, the proportion of births that are births by caesarean section has increased from 33.6% in 2010 to 38.2% in 2019 (Figure 13). Over the same period, induced labour has increased from 28.5% to 34.7%.

One factor that can be attributed to the higher caesarean rate is the older age at which women are having their first child. Other factors include obesity and in vitro fertilisation (Cassells, Kiely *et al.*, 2019).

FIGURE 13

Proportion of women who had an induction of labour or had a birth by caesarean section, WA, 2010 to 2019



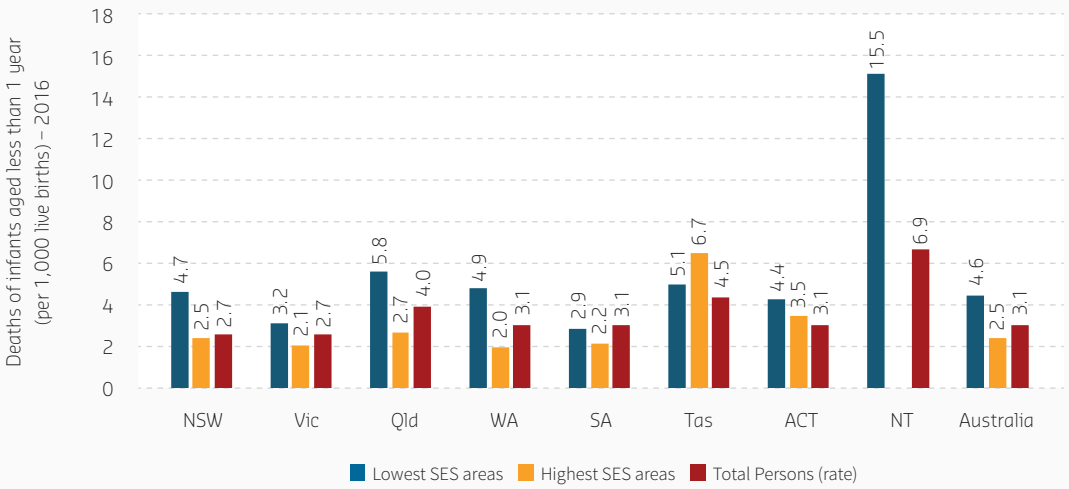
Source: Bankwest Curtin Economics Centre | Authors' calculations based on WA Department of Health, Government of WA sources from https://ww2.health.wa.gov.au/Reports-and-publications/Western-Australias-Mothers-and-Babies-summary-information/data?report=mns_birth_y

In all states and territories, excluding Tasmania, infant death was noticeably higher in those areas with a lower socioeconomic status (Figure 14). Tasmania was the only state or territory to record higher infant mortality in the higher socioeconomic status group.

The NT has the unenviable record of having the highest number of infant deaths per 1,000 births in the country. This could be attributed to the large Indigenous population, location of health services in relation to the population and poorer health outcomes for Territorians more generally (Australian Institute of Health and Welfare, Australia's Health 2020). WA's death rate of infants aged less than 1 year old sits at 3.1 per 1,000 live births, and is aligned with the Australian average. However, WA does report a higher rate (4.9 per 1,000 live births) for the lowest SES areas relative to the average reported for the lowest SES areas across the nation (4.6 per 1,000 live births).

FIGURE 14

Deaths of infants aged less than 1 year (per 1,000 births), 2016



Note: Rates per 1,000 births. Data for NT was not available for highest SES group either because of small numbers, confidentiality or other concerns about the quality of the data. Such data is included in totals where applicable, unless otherwise indicated.

Source: Bankwest Curtin Economics Centre | Authors' calculations based on AIHW National Hospital Morbidity Database.

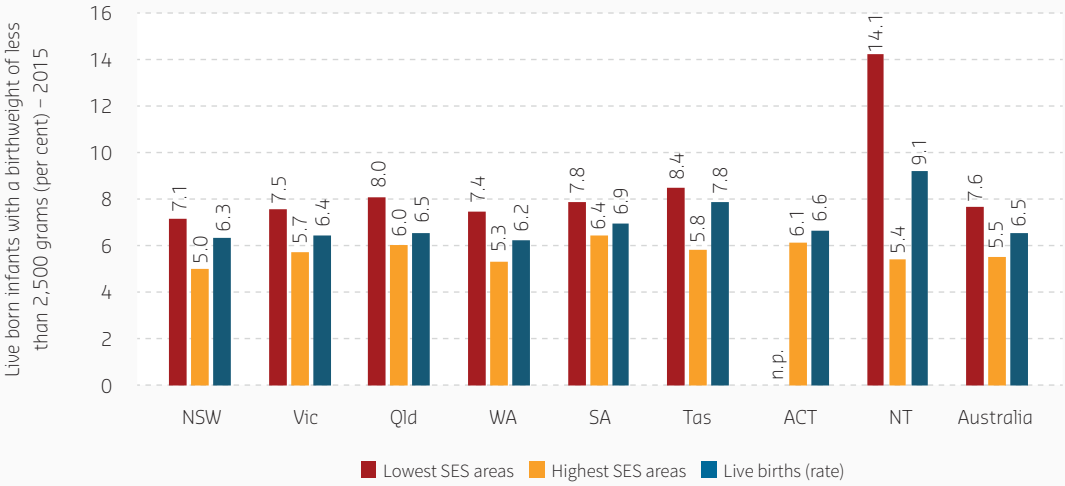
Across all states, babies born in lower SES areas had a higher share of live born infants with a low birth weight, more than 2.1ppts higher than those from higher SES areas.

Figure 15 illustrates the low birth weights by State and socioeconomic status (SES) area. Across all states, babies born in lower SES areas had a higher share of live born infants with a low birth weight, more than 2.1ppts higher than those from higher SES areas. This gap is as high as 8.7ppts in the NT. For WA, low birth rates lay slightly below that of the national average across both the lowest and highest SES groups, sitting 0.3ppts lower for all live births (6.2% in WA compared to 6.5% nationally).

Indigenous babies are almost twice as likely to be low birth weight, with 12% of Indigenous births and 6.4% of non-Indigenous births underweight in 2018 (AIHW 2020). The recent *Closing the Gap in Partnership* National Partnership Agreement sets a target of 91% of Indigenous babies born with a healthy birth weight by 2031 (PM&C 2020).

FIGURE 15

Low birth weights by State and SES area, 2015



Note: Live born infants with a birthweight of less than 2,500 grams (per cent) – 2015. Where data is not provided (n.p.), this is not available either because of small numbers, confidentiality or other concerns about the quality of the data. Such data is included in totals where applicable, unless otherwise indicated.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on AIHW National Hospital Morbidity Database.

Western Australian children have a high rate (91%) of full immunisation at aged two, and is in line with that reported nationally (Figure 16). Across Australia, these rates did average 91% from 2008 to 2016, but dropped to 88.4% in 2015.

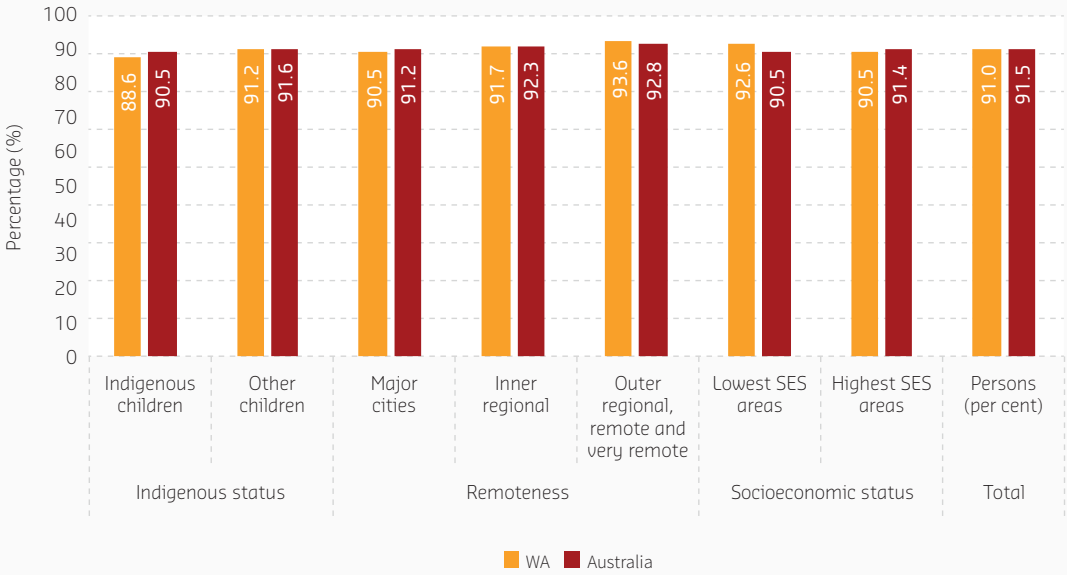
As of 2016, Indigenous children both in WA and nationally, had slightly lower rates of immunisation relative to non-Indigenous children. Interestingly, as of 2016 in WA, children in lower SES areas had higher immunisation rates (92.6%) relative to the highest SES areas (90.5%), with higher rates also reported in more regional and remote areas compared to major cities. The Federal Government's introduction of the "No Jab, No Play" initiative (introduced in 2016) has played a role in contributing to a return to higher levels of immunisation nationally.

As of 2016, Indigenous children both in WA and nationally, had slightly lower rates of immunisation relative to non-Indigenous children.

in WA, children in lower SES areas had higher immunisation rates (92.6%) relative to the highest SES areas (90.5%), with higher rates also reported in more regional and remote areas compared to major cities.

FIGURE 16

Children who are fully immunised at 2 years of age, 2016



Note: Children on the ACIR who are fully immunised at 2 years of age (%), quarter ending 30 September 2016. Historical comparisons cannot be made due to changes in the data collation.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on AIHW data as sourced from Australian Childhood Immunisation Register.

SUMMARY

This chapter has focused on some of the key issues relating to the health and wellbeing of mothers and babies in the first year of life. Across almost all measures, mothers with a lower socio-economic background, mothers living in the regions and Indigenous people have poorer outcomes and are more likely to display risky behaviours during pregnancy. The lack of analysis of the mental health and wellbeing of mothers and babies in this section reflects the comparative lack of data in this area. The office of the Commissioner for Children and Young People (CCYP) have identified this gap, as reported in their Indicators of Wellbeing. This is a critical area that requires further data collation and reporting. The next chapter on toddlerhood focuses further on the issues of mental health in the early years.

TODDLERHOOD

INTRODUCTION

Data from the 2018 AEDC suggested that 1 in 5 children in Australia were developmentally vulnerable on one or more domains by the time they started primary school – highlighting the importance of early detection and treatment of developmental problems in very young children.

Children between 12 and 36 months old are defined as being in toddlerhood. During their toddler years, children undergo rapid developmental changes. The most important of these are within their language and social skills, but also evident in all the other areas including their physical health (Colson and Dworkin, 1997).

The healthy development of toddlers can be measured using five broad developmental dimensions of toddlerhood: physical, language, attachment, social emotional, and cognitive (Sawyer, Gialamas, Pearce, Sawyer, Lynch, 2014). One national data source which provides a measure of how Australian children have developed by the time they start primary school is the Australian Early Development Census (AEDC). The AEDC measures the development of children in Australia across five key domains: physical health and wellbeing; social competence; emotional maturity; language and cognitive skills (school-based); and communication skills and general knowledge. The data from the 2018 AEDC suggested that 1 in 5 children in Australia were already developmentally vulnerable on one or more domains by the time they started primary school[2].

This highlights the importance of the early detection and treatment of developmental and health problems in very young children, before they reach their first year of school. In WA, the Department of Health's Community Child Health Program provides families with young children access to five free child health checks, at 0 - 14 days, 8 weeks, 4 months, 12 months, and 2 years. In addition, they also provide a School Entry Health Assessment in the first year of a child's school attendance. Data from the WA Child and Adolescent Community Health Service suggests that a low proportion of toddlers are actually being taken by their parents for their free child health checks. From Table 4 it can be seen that in 2017-18 only 53.0% of eligible toddlers were taken for their 12-month child health check in the Perth metropolitan area, and an even lower proportion were taken for their 2-year child health check (28.9%).

TABLE 4

Child health checks delivered in the Perth metropolitan area, WA, July 2017 to June 2018

Health Check Type	Eligible children (Number)	Children Completing Universal Check (Number)	Children Completing Universal Check Plus or Drop-In Check (Number)	Total (Number)	Percentage of Eligible Children Seen (%)
0 – 14 days	27,008	26,593	316	26,909	99.6%
8 weeks	27,154	23,316	1,245	24,561	90.5%
4 months	27,370	21,628	3,159	24,787	90.6%
12 months	27,886	11,843	2,932	14,775	53.0%
2 years	28,415	7,077	1,128	8,205	28.9%

Source: Bankwest Curtin Economics Centre | Reproduced from Commissioner for Children and Young People Indicators of Wellbeing data (2020). Custom report was provided by the Child and Adolescent Community Health service from Child Development Information System and contracted service database to the Commissioner for Children and Young People.

2 The AEDC ranks the developmental progress of children using three levels of developmental progress: developmentally on track, developmentally at risk, and developmentally vulnerable. Children whose score was in the top 75% are classified as developmentally on track; children who were classified as developmentally at risk had a score between the 10th and 25th percentile, and children whose score was in the bottom 10% were classified as developmentally vulnerable.

The remainder of this chapter will examine mental health issues amongst toddlers (e.g. behavioural problems and delays in the development of social-emotional competence) and delays in the development of language amongst toddlers in WA and Australia.

In particular, it will examine some of the environmental risk factors associated with the development of mental health issues and delays in the development of language amongst toddlers, and the estimated prevalence of mental health issues and delays in the development of language among toddlers based on these environmental risk factors.

The focus on toddler mental health is an important issue which as the Western Australian Commissioner for Children and Young People (2020) has highlighted:

> "there is a reluctance to acknowledge that very young children can and do experience mental health issues that may result in serious social, emotional or behavioural problems in adolescence and adulthood, e.g. aggression, anxiety, and depression ".

There is a growing body of research evidence which shows that children with mental health problems are more likely to achieve poorer academic outcomes compared to children who do not have mental health problems, and an increasing recognition of the importance of early academic skills for later academic achievement.

In order to provide some indication of the prevalence of mental health issues among toddlers in WA and Australia, this chapter uses data from the Longitudinal Study of Australian Children (LSAC), which follows the same children over time. One of the limitations in using the LSAC data is that data toddler as captured in 2006, however the LSAC data is one of the most comprehensive and reliable datasets to examine the prevalence of mental health issues for toddlers growing up in WA and Australia.

In 2017-18, only 53.0% of eligible toddlers were taken for their 12-month free child health check in the Perth metropolitan area, with only 28.9% taken for their 2-year free child health check.

MENTAL HEALTH

Scientific research has found clear evidence that significant mental health problems can and do occur in very young children.

Mental health issues amongst toddlers include behavioural problems and delays in the development of social-emotional competence.

Mental health is built at an early age, with early experiences such as children's relationships with their parents, caregivers, relatives, teachers, and peers all playing a critical role in shaping children's social, emotional and cognitive development (The National Scientific Council of the Developing Child 2012). Scientific research has found clear evidence that significant mental health problems can and do occur in very young children. The detection and treatment of mental health problems in very young children is important as it can impact on healthy brain development and learning capabilities. During this period of development there is accumulating evidence demonstrating that early experiences and disruptions and adversities have profound influences on development throughout the lifespan.

Mental health issues among very young children, aged 1 to 3 years, include behavioural problems, marked emotional distress, and delays in the development of social-emotional competence and other domains of development. Significant behavioural problems in children can develop through either externalising behaviour or internalising behaviour, (Aunola and Nurmi, 2005). Externalising behaviour problems include disruptive, hyperactive, and aggressive behaviours. Conversely, internalising behaviour problems are problems which affect a child's internal psychological environment and include problems such as withdrawn, anxious, inhibited and depressed behaviours (Liu, 2004). While behavioural problems are expected to occur as part of a child's normal development, the escalation of these can interfere with a child's development, causing significant distress for caregivers as (Holtz *et al.* 2009).

Heckman (2008) notes that the family environments of very young children are a major predictor of socio-emotional and cognitive abilities, as well as a variety of outcomes, such as health and crime. We now know that the way mental health issues are expressed in very young children can largely depend on the type of relationships they have with their caregivers (Zeanah & Lieberman, 2016). Of the many different roles that parents play in the lives of their children, an attachment figure is one of the most important in predicting a child's later social and emotional outcomes (Benoit 2004). Four archetypes of child-parent attachment exist (Table 5) .

TABLE 5

Types of Attachment and Antecedents

Quality of Caregiving			Strategy to Deal with Distress		Type of Attachment
Sensitive	Loving	→	Organised	→	Secure
Insensitive	Rejecting	→	Organised	→	Insecure-avoidant
Insensitive	Inconsistent	→	Organised	→	Insecure-resistent
Atypical	Atypial	→	Disorganised	→	Insecure-disorganised

Source: Benoit (2004).

The type of attachment a child develops for a particular caregiver is, for the most part, determined by the quality of the caregiver's response to a child, when the child is in distress (Benoit 2004). Beginning at around six months of age, children come to anticipate the response of caregivers to them when they are in distress and shape their own behaviour. The four types of child-parent attachment are based on the quality of the caregiver's response to a child in distress and the strategy the child develops for dealing with distress.

In a secure child-parent attachment, the parent responds to a child in distress in a sensitive and loving manner and the child's strategy is organised because the child knows that they can seek comfort from the parent when in distress.

The literature suggests that there are also a number of other biological and inter-connected environmental risk factors that predispose children to social-emotional and behavioural problems in early childhood, including poverty, family structure and drug and alcohol issues (see for example, Holtz et al 2015; Harden et al. 2014). Low-income households in particular "are at higher risk of family and social stressors....which in turn, negatively impact parenting practices that have been found to be related to the development and exacerbation of behavioural problems in children" (Holtz *et al*. 2015).

The relationship between children's mental health and school readiness is also an important one, with Bethell *et al.* (2012) noting that social and emotional competency and a child's sense of inclusion and level of engagement are important aspects of academic performance. There is a growing body of research around school readiness which suggests that children with mental health problems are more likely to achieve poorer academic outcomes compared to children who do not have mental health problems.

Research indicates that the early detection and intervention with children and their parents can have a positive and long-lasting impact on the outcomes for children (National Scientific Council of the Developing Child, Harvard University, 2012). Furthermore, Doyle *et al.* (2009) note that the majority of successful early childhood interventions start in the preschool years and there are numerous evidence-based interventions targeting younger age groups that have demonstrated effectiveness (Bernard, Dozier, Bick, Lewis-Morrarty, Lindhiem, & Carlson, 2012; Lieberman, Van Horn, and Ippen, 2005).

From a policy perspective, the findings from a number of studies provide evidence to justify the investment in early childhood interventions. For example, Doyle *et al.* (2009) note that findings from longitudinal studies, such as the Caroline Abecedarian Programme, High/Scope Preschool Programme, Chicago Parent-Child Programme, and Nurse-Family Partnership have long been used to justify investing in early childhood interventions in policy discussions around the world.

Environmental risk factors which predispose very young children to mental health problems include attachment, parental warmth and mental health, poverty and socioeconomic status along with family structure.

The findings from a number of studies suggest that the personal and social benefits and government savings associated with intervening early in a child's life clearly outweigh the costs (Doyle *et al.*).

There is also further evidence which suggests that early childhood intervention substantially boosts adult health. In a study using biomedical data from the Carolina Abecedarian Programme (ABC), Campbell, Conti, Heckman, Moon, Pinto, Pungello, and Pan (2014) found that disadvantaged children randomly assigned to early childhood programs had significantly lower prevalence of risk factors for cardiovascular and metabolic diseases in their mid-30s, with the evidence being especially strong for males.

As noted in the introduction to this chapter, there is very limited data available on the prevalence of mental health issues among toddlers in WA and Australia. One of the very few datasets which provides a measure of the prevalence of mental health issues among toddlers is the Longitudinal Study of Australian Children (LSAC). The tool used in the LSAC to measure the mental health of toddlers is the Brief Infant Toddler Social and Emotional Assessment (BITSEA)[3]. The BITSEA is comprised of two components. The first is the 31-item BITSEA problem scale, which is used to assess behavioural problems such as aggression, defiance, overactivity, negative emotionality, anxiety and withdrawal. The BITSEA problem scale of-concern cut-off point is greater than or equal to the 75th percentile. The second is the 11-item BITSEA competence scale, which is used to assess social-emotional abilities such as empathy, prosocial behaviour, and compliance. The BITSEA competence scale of-concern cut-off point score is less than 15th percentile, which suggests that delays in social-emotional competence may be present (Briggs-Gowan and Carter, 2008).

The remainder of this section presents an overview of the estimated incidence of mental health issues among toddlers in WA and Australia[4] in 2006, using data from the LSAC, when toddlers were aged between 2 and 3 years of age. The unit of analysis is the parent who has the most to do with the child, which is labelled as parent 1 in the LSAC. The estimated incidence of mental health issues among toddlers is presented for selected environmental risk factors, which were chosen as a result of the findings from the review of the research literature.

It is important to remember that in interpreting the selected environmental risk factors statistics, that these are based on individual environmental risk factors, and that the interaction of multiple environmental risk factors may either decrease or increase the incidence of mental health issues amongst toddlers. For example, positive parenting can act as a buffer against early family adversity. In addition, the inclusion of various groups in the analysis, such as single parents, have been included to highlight some of the characteristics of these groups that may be driving the prevalence of mental health issues amongst toddlers within these groups, and as a consequence inform the development of policy so that mental health and other resources can be focused where they are most needed.

3 In WA, the Ages and Stages Social-Emotional Questionnaire is used for the early detection of social-emotional and behavioural problems in toddlers.

4 Due to the limited number of observations in the LSAC for toddlers in WA, only certain environmental risk factors have been analysed at the Western Australian level. Where there were not sufficient observations, the analysis is presented for Australia.

Figure 17 shows the estimated prevalence of social-emotional competence problems amongst toddlers in Australia in 2006, by selected environmental risk factors. Toddlers whose BITSEA competence scale score was less than the of-concern cut-off point were classified as having social-emotional competence problems. The first point to note from Figure 17 is that the estimated prevalence of social-emotional competence problems amongst toddlers in WA was 15.9% in 2006. This was slightly lower compared to that for the whole of Australia at 16.3%.

Amongst the selected environmental risk factors, parental warmth had the largest estimated effect on the prevalence of social-emotional competence problems amongst toddlers in Australia. The three levels of parental warmth (i.e. Always/Almost Always, Often, and Rarely/Sometimes) are related to how often a parent hugs or holds their child; tells their child how happy they make them; have warm, close times with their child; enjoys listening and doing things with their child; feel close to their child when the child is happy and when the child is upset; and expresses affection by hugging, kissing, and holding their child. The results suggest that the prevalence of social-emotional competence problems amongst toddlers is highest amongst those whose primary caregiver only rarely/sometimes showed affection, warmth, or engaged in activities with their child, with 43.8% of toddlers amongst this group estimated to have social-emotional competence problems.

The mental health of parents had the second largest estimated effect on the prevalence of social-emotional competence problems amongst toddlers in Australia, with the percentage of children classified as having social-emotional competence problems being nearly twice that for parents with a probable serious mental health illness (28.5%) compared to parents who had no probable serious mental health illness (15.7%). Similarly, the gender of the toddler also had a notable effect on the prevalence of social-emotional competence problems amongst toddlers, with 20.0% of boys being classified as having social-emotional competence problems compared to only 12.2% of girls. The results also suggest that other environmental risk factors that increase the incidences of social-emotional competence problems amongst toddlers were living in a household in severe poverty, living in a low socioeconomic area, and living in an outer regional, remote, or very remote area.

In 2006, 15.9% of toddlers in WA were estimated to have social-emotional competence problems, which was slightly lower to that for Australia (16.3%).

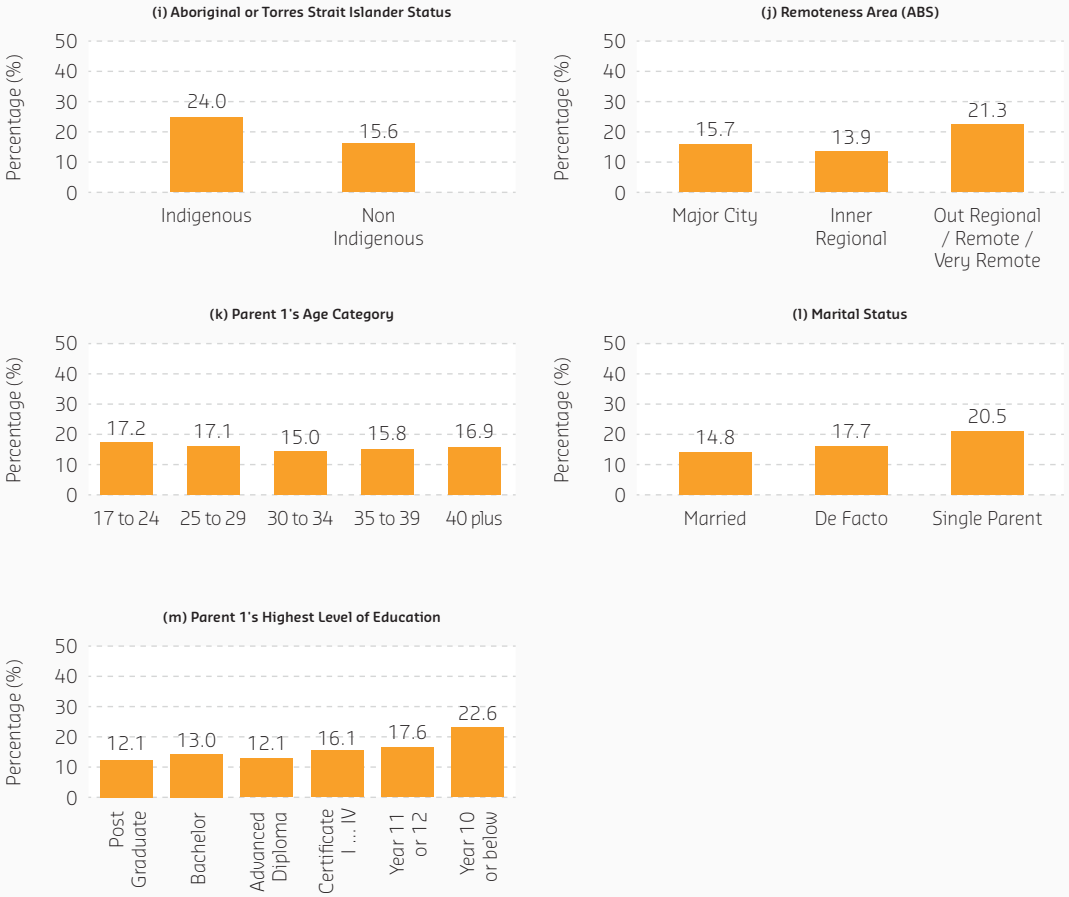
A major channel through which early intervention programs operate is through producing non-cognitive skills, which are often neglected in economic and social policy forums (Heckman, 2010).

FIGURE 17

The Prevalence of Social-Emotional Competence Problems in Toddlers by Selected Environmental Risk Factors, Australia, 2006

FIGURE 17 (continued)

The Prevalence of Social-Emotional Competence Problems in Toddlers by Selected Environmental Risk Factors, Australia, 2006



Notes: (1) The three levels of parental warmth (i.e. Always/Almost Always, Often, and Rarely/Sometimes) are related to how often a parent hugs or holds their child; tells their child how happy they make them; has warm, close times with their child; enjoy listening and doing things with their child; feels close to their child when the child is happy and when the child is upset; and expresses affection by hugging, kissing, and holding their child. (2) The three levels of hostile parenting (i.e. 1 to 3 times, 4 to 5 times, and 6 to 10 times) are related to how many times in a six month period a parent has been angry with their child; raised their voice and shouted at their child, the child got on the parent's nerves when the child cried; the parent lost their temper with their child; or left their child alone in the child's bedroom when the child was particularly irritable or upset.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on Longitudinal Study of Australian Children data.

The findings from a number of studies suggest that the personal benefits, social benefits, and government savings associated with intervening early in a child's life clearly outweigh the costs (Doyle, Harmon, Heckman, and Tremblay, 2009).

In 2006, 15.9% of toddlers in WA were estimated to have social-emotional competence problems, which was slightly lower to that for Australia (16.3%).

43.8% of toddlers, whose primary caregiver only rarely/ sometimes showed affection, warmth, or engaged in activities with their child, were estimated to have social-emotional competence problems.

28.5% of toddlers whose primary caregiver had a probable serious mental health illness were estimated to have social-emotional competence problems.

Figure 18 shows the estimated prevalence of behavioural problems amongst toddlers in Australia in 2006, by selected environmental risk factors. Toddlers whose BITSEA problem score was greater than or equal to the of-concern cut-off point were classified as having behavioural problems.

Notably, the estimated prevalence of behavioural problems amongst toddlers across all categories of the selected environmental risk factors was higher compared to the estimated prevalence of social-emotional competence problems.

FIGURE 18

The Prevalence of Behavioural Problems in Toddlers by Selected Environmental Risk Factors, Australia, 2006

FIGURE 18 (continued)

The Prevalence of Behavioural Problems in Toddlers by Selected Environmental Risk Factors, Australia, 2006

Notes: (1) The three levels of parental warmth (i.e. Always/Almost Always, Often, and Rarely/Sometimes) are related to how often a parent hugs or holds their child; tells their child how happy they make them; has warm, close times with their child; enjoys listening and doing things with their child; feels close to their child when the child is happy and when the child is upset; and expresses affection by hugging, kissing, and holding their child.
(2) The three levels of hostile parenting (i.e. 1 to 3 times, 4 to 5 times, and 6 to 10 times) are related to how many times in a six month period a parent has been angry with their child; raised their voice and shouted at their child, the child got on the parent's nerves when the child cried; the parent lost their temper with their child; or left their child alone in the child's bedroom when the child was particularly irritable or upset.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on Longitudinal Study of Australian Children data.

In 2006, nearly 1 in 4 toddlers in WA were estimated to have behavioural problems.

46.3% of toddlers, whose primary caregiver had 6 to 10 hostile parenting incidents over a six-month period, were estimated to have behavioural problems.

43.8% of toddlers, whose primary caregiver only rarely/sometimes showed affection, warmth, or engaged in activities with their child, were estimated to have social-emotional competence problems.

38.2% of toddlers from households living in severe poverty were estimated to have behavioural problems.

As with the estimated prevalence of social-emotional competence problems amongst toddlers, the estimated prevalence of behavioural problems amongst toddlers in WA (24.3%) was lower compared to that for the whole of Australia (27.5%) in 2006. Amongst the selected environmental risk factors, hostile parenting and parental warmth had the largest and second largest estimated effects on the prevalence of behavioural problems amongst toddlers in Australia. The three levels of hostile parenting (i.e. 1 to 3 times, 4 to 5 times, and 6 to 10 times) are related to how many times in a six month period a parent has been angry with their child; raised their voice and shouted at their child, the child got on the parent's nerves when the child cried; the parent lost their temper with their child; or left their child alone in the child's bedroom when the child was particularly irritable or upset.

As can be seen from panel (f) in Figure 18, an estimated 46.3% of toddlers, whose primary caregiver had 6 to 10 hostile parenting incidents over a six-month period, were classified with behavioural problems, which is over twice the rate of toddlers whose primary caregiver only had 1 to 3 hostile parenting incidents over a six-month period. Similarly, an estimated 43.5% of toddlers were classified as having behavioural problems where their primary caregiver only rarely/sometimes showed affection, warmth, or engaged in activities with them. In contrast, where a parent always/almost always showed affection, warmth, or engaged in activities with their toddler, only 21.8% of toddlers were estimated to have behavioural problems.

In contrast to social-emotional competence problems, there was a much larger estimated prevalence of behavioural problems amongst toddlers from households living in severe poverty (38.2%). There was also a larger prevalence of behavioural problems amongst toddlers who lived in low socioeconomic areas (31.6%). Interestingly, toddlers living in outer regional, remote, and very remote areas had the lowest estimated prevalence of behavioural problems (23.8%), with toddlers living in major cities having the highest prevalence of behavioural problems, at 28.5%. Similar to social-emotional competence problems, boys had a higher estimated prevalence of behavioural problems (29.9%) compared to girls (24.9%).

Indigenous toddlers and mental health

While data on mental health for Indigenous toddlers in Western Australia are even more scarce, it is abundantly clear that the inequities confronting Indigenous youth on many indicators of life outcomes have their precedents in early childhood. Perhaps most distressingly among these indicators, the rate of juvenile detention (children aged 10-17 years) for Indigenous West Australians is double the national rate for Indigenous juveniles and seventeen times the rate for non-Indigenous West Australians; while the rate of suicide among West Australians aged under 25 years of age is around 7 times higher for Indigenous youth than non-Indigenous youth (Standing Committee for the Review of Government Service Provision [SCRGSP] (2016).

It is not possible in this report to do justice to the full complexity of factors contributing to the shameful disparity in outcomes for West Australia's First Nations people. Important among them are the trauma and other legacies associated with past injustices, including the Stolen Generations and other policies of cultural destruction and assimilation. These are discussed further in the chapter on child protection. Data presented in that chapter on the over-representation of Indigenous children in WA's child protection system and in out-of-home care placements offer confronting evidence that challenges facing Indigenous West Australians are manifest from early childhood.

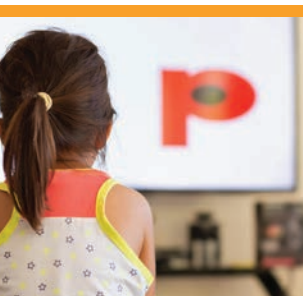
Here we present evidence to demonstrate many of the same socio-economic determinants of mental health development – but not all – apply for Indigenous and non-Indigenous toddlers. A full decomposition of differences in outcomes, accounting for both differences of effects and in socioeconomic backgrounds is not possible. Plus, to repeat, there are other factors that impact uniquely on Indigenous youth that must be addressed. Bankwest Curtin Economics Centre research has presented evidence of the importance of promoting Indigenous cultural identity in improving outcomes for Indigenous Australians and children (Dockery 2012, 2020; Yap and Yu 2016). It is also clear that the arguments for the merits of early intervention are magnified in the case of Indigenous children.

The Productivity Commission's Overcoming Indigenous Disadvantage reports provide regular snapshots on disparities for Indigenous Australians under the 'Closing the Gap' framework, which identifies early childhood development as a strategic area for action. Data for WA included in the most recent (2016) report, show that 12.8% of babies born to Indigenous mothers from 2011 to 2013 were low weight, compared to 4.4% of babies born to non-Indigenous mothers; Indigenous children aged 0-4 were 1.8 times more likely to be hospitalised, compared to 1.3 times nationally (SCRGSP 2016). However, the report does not include indicators of mental health in early childhood. The Western Australian Aboriginal Child Health Survey, conducted from 2000 to 2002, collected data specific to Indigenous children in this state. In addition to that data being quite dated, analyses of child mental health from that survey focussed on children aged 4 to 17. Shepherd, Li, Mitrou and Zubrick (2012), for example, found that 24% of children aged 4-17 from the survey were at high risk of emotional or behavioural difficulties, with low quality housing and low neighbourhood SES and parental SES identified as prominent risk factors.

The Longitudinal Survey of Indigenous Children (LSIC) included measures of social and emotional adjustment of children through an adapted version of the Strengths and Difficulties Questionnaire (SDQ). This was first administered to parents or carers of the survey's 'baby cohort' in 2010, when the cohort was aged from 21/2 to 4 years, thus providing a rare measure of socio-emotional adjustment for Indigenous toddlers. The following analyses of the LSIC data relates only to that particular cohort in 2010 (or wave 3). While this is not directly comparable to the BITSEA problem score, it does permit a cursory assessment of whether key factors impact similarly upon the mental health of Indigenous toddlers. Due to the sample size, it is again necessary to use data for all of Australia.

Overall, one-quarter (24.5%) of the study children were assessed as displaying an abnormal number of social and emotional problems. Selected associations are presented in Figure 19 with results based on responses from between 740 to 809 parents or carers of children from the Baby cohort, depending on non-response for various items. As with the BITSEA, boys are typically reported to have more behavioural problems than girls, and this holds for the Indigenous sample of toddlers from the LSIC. Noting that these figures make no allowance for potential confounding factors, strong associations between the incidence of parental report of behavioural problems for Indigenous toddlers are apparent with respect to household financial circumstances, parenting style and parental education.

The study child's household was assessed as being in financial stress if the responding parent indicated that one of the following things happened in the previous 12 months as a result of being short of money: they could not pay bills on time, could not make housing payments, they went without meals, were unable to heat or cool their home, they pawned or sold something, or needed



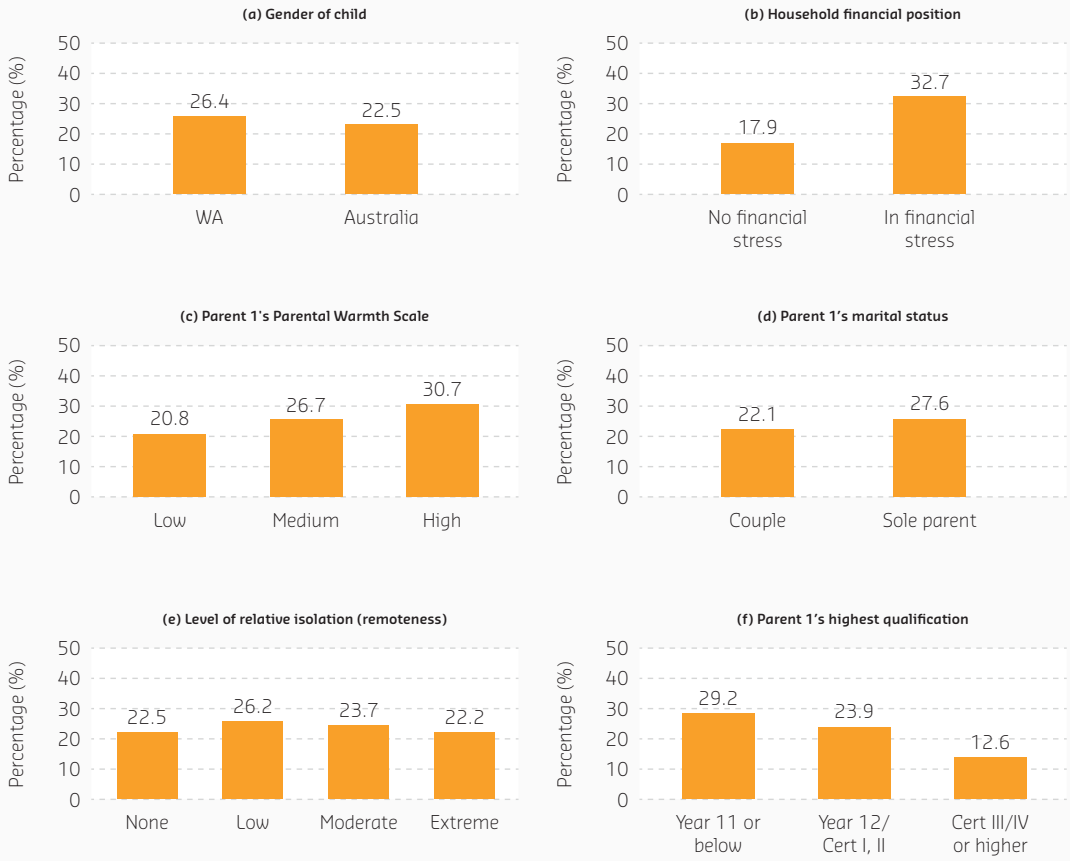
Almost 45% of the study children's households were assessed as being in financial stress; and the incidence of behavioural problems around twice as high for children in those households.

assistance from a welfare organisation. On this basis, almost 45% of the study children's households were assessed as being in financial stress; and the incidence of behavioural problems around twice as high for children in those households. Behavioural problems also vary with parenting warmth. In the figures reported, the responding parents were divided roughly into three groups based on the parenting warmth scale, which is based on a very similar set of questions as used in the LSAC. Those with warmer parenting styles reported fewer socio-emotional behavioural problems in their children, though there is obvious potential for endogeneity here.

A strong gradient is also apparent by parental education. Over half the responding parents had completed Year 11 or below as their highest level of education, and for this group behavioural problems were reported for 29% of children. Very few parents had university level qualifications, and consequently those with a Certificate level III/IV (which will include trade qualifications), diplomas and degree level qualification were grouped into the one category. For this group of more qualified parents, the reported incidence of behavioural problems in their children was markedly lower, at just 12.6%.

FIGURE 19

The Prevalence of Social-Emotional Behavioural difficulties in Indigenous Toddlers by Selected Environmental Risk Factors, Australia, 2010



Source: Bankwest Curtin Economics Centre | Authors' calculations based on data from the LSIC.

DEVELOPMENT OF LANGUAGE

By around 18-months-old the average toddler has a vocabulary of at least 20 words which typically consisting of the names of caregivers, favourite foods and activities, often putting two words together (Colson and Dworkin 1997). In addition, their receptive language skills are more advanced than their expressive skills, and they will be able to understand more complex instructions. At around 2 years of age toddlers can use language to convey their thoughts and needs (e.g. hunger and pain), and by the age of 3, a toddler's vocabulary has increased to about 500 words.

The development of language by toddlers is influenced by environmental risk factors as well as by innate abilities (Colson and Dworkin, 1997). Many studies of toddler language development have investigated the relationship between environmental risk factors and language development, and have found evidence to suggest that a number of environmental factors, such as parent-child communicative interaction, parental stress, low parental education, low parental expressiveness, poverty, and family socioeconomic status, may affect the development of language (see for example Hawa and Spanoudis (2014); Horwitz *et al*. (2003)).

The remainder of this section presents an overview of the estimated incidence of delays in development of language (vocabulary) in toddlers in WA and Australia[6] in 2006, using data from the LSAC. The toddlers in the LSAC data were aged between 2 and 3 years of age. The tool used in the LSAC to measure the language development of toddlers is the MacArthur-Bates Communicative Development Inventories (CDI). The MacArthur–Bates Communicative Development Inventories (CDI) are parent report instruments which capture important information about children's developing abilities in early language, including vocabulary, comprehension, production, gestures and grammar (MacArthur-Bates CDI, 2020). Toddlers in the LSAC whose vocabulary consisted of 30 or less words were classified has having a delay in language development (vocabulary).

Figure 20 show the estimated prevalence of delays in the development of language (vocabulary) amongst toddlers in Australia in 2006, by selected environmental risk factors. As with the estimated prevalence of social-emotional competence problems and behavioural problems, the estimated prevalence of delays in language development amongst toddlers in WA (20.0%) was slightly lower, 0.7 percentage points, compared to that for the whole of Australia (20.7%) in 2006 (see panel (a) in Figure 20). Also similar to the estimated prevalence of social-emotional competence problems and behavioural problems, parental warmth had the largest estimated prevalence of delays in language development amongst toddlers, with the results suggesting that the prevalence of delays in language development amongst toddlers is the highest, at 39.7%, amongst parents who only rarely/sometimes showed affection, warmth, or engaged in activities with their toddlers (see panel (e) in Figure 20).

The estimated prevalence of delays in language development amongst toddlers was similar for parental mental health status, household poverty status, parental education, and parental age category. Amongst toddlers whose primary caregiver had a probable serious mental illness, 30.6% where estimated to have delays in language development (see panel (g) in Figure 20). The prevalence of delays in language development were similar for toddlers from households living in severe poverty, with an estimated 29.7% of toddlers being classified as having delays in language development.

The development of language by toddlers may be affected by environmental risk factors such as parent-child communicative interaction, parental stress, low parental education, low parental expressiveness, poverty, and family socio-economic status.

1 in 5 toddlers in WA were estimated to have delays in language development, in 2006.

6 Due to the limited number of observations in the LSAC for toddlers in WA, only certain environmental risk factors have been analysed at the Western Australian level. Where there were not sufficient observations, the analysis is presented for Australia.

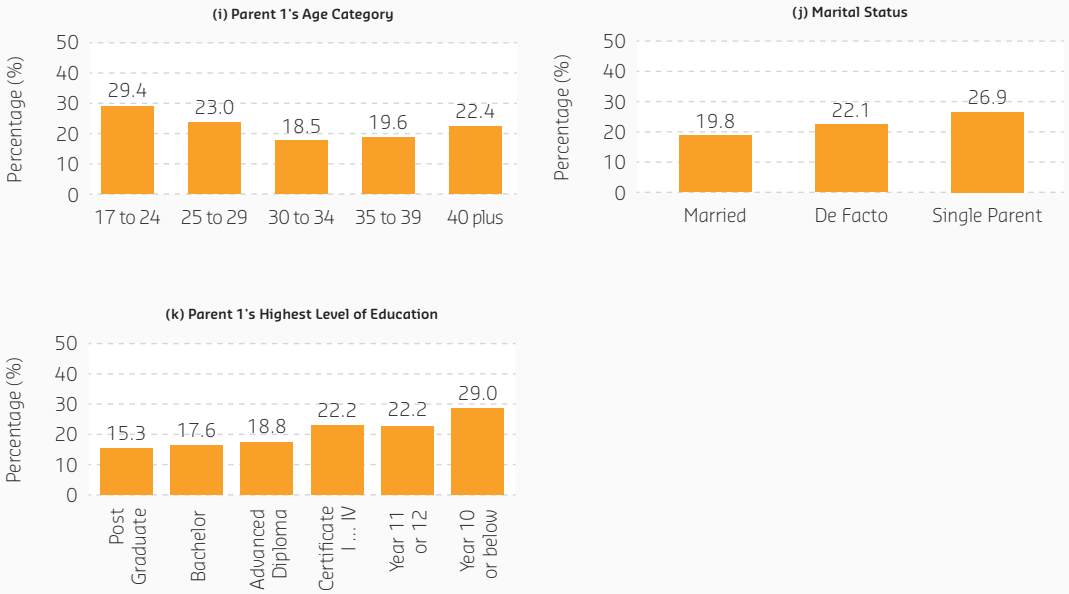
FIGURE 20

The Prevalence of Delays in the Development of Language (Vocabulary) in Toddlers by Selected Environmental Risk Factors, Australia, 2006

Notes: (1) The three levels of parental warmth (i.e. Always/Almost Always, Often, and Rarely/Sometimes) are related to how often a parent hugs or holds their child; tells their child how happy they make them; has warm, close times with their child; enjoy listening and doing things with their child; feels close to their child when the child is happy and when the child is upset; and expresses affection by hugging, kissing, and holding their child. (2) The three levels of hostile parenting (i.e. 1 to 3 times, 4 to 5 times, and 6 to 10 times) are related to how many times in a six month period a parent has been angry with their child; raised their voice and shouted at their child, the child got on the parent's nerves when the child cried; the parent lost their temper with their child; or left their child alone in the child's bedroom when the child was particularly irritable or upset.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on Longitudinal Study of Australian Children data.

FIGURE 20 (continued)

The Prevalence of Delays in the Development of Language (Vocabulary) in Toddlers by Selected Environmental Risk Factors, Australia, 2006



Notes: (1) The three levels of parental warmth (i.e. Always/Almost Always, Often, and Rarely/Sometimes) are related to how often a parent hugs or holds their child; tells their child how happy they make them; has warm, close times with their child; enjoy listening and doing things with their child; feels close to their child when the child is happy and when the child is upset; and expresses affection by hugging, kissing, and holding their child. (2) The three levels of hostile parenting (i.e. 1 to 3 times, 4 to 5 times, and 6 to 10 times) are related to how many times in a six month period a parent has been angry with their child; raised their voice and shouted at their child, the child got on the parent's nerves when the child cried; the parent lost their temper with their child; or left their child alone in the child's bedroom when the child was particularly irritable or upset.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on Longitudinal Study of Australian Children data.

29.7% of toddlers from households living in severe poverty were estimated to have delays in language development.

29% of toddlers, whose primary caregiver's highest level of education was Year 10 or below, were estimated to have delays in language development.

The trend in the estimated prevalence of delays in language development based on parental education reflects the findings from the research literature, with the prevalence of delays in language development decreasing as the highest level of parental education increased. From panel (k) in Figure 20, it can be seen that amongst toddlers whose primary caregiver's highest level of education was Year 10 or below, 29% were classified has having delays in language development. This is compared to only 15.3% of toddlers whose primary caregiver's highest level of education was a post-graduate degree.

In respect to parental age, the highest estimated prevalence of delays in language development were amongst toddlers whose primary caregiver was aged between 17 and 24, at 29.4%. Whereas primary caregivers aged between 30 and 34 had the lowest estimated prevalence of delays in language development amongst toddlers, at only 18.5% (see panel (i) in Figure 20). As with the estimated prevalence of social-emotional competence problems and behavioural problems, boys had a higher estimated prevalence of delays in language development, at 24.1%, compared to girls at only 17.2% (see panel (b) in Figure 20).

As with non-Indigenous toddlers, boys' language development lags behind that of girls.

There is again a clear and inverse relationship between the responding parent's level of educational attainment and the study child's language development.

Indigenous Toddlers and Development of Language

The MacArthur-Bates Communicative Development Inventories were also used in the Longitudinal Survey of Indigenous Children, and data collected for the Baby cohort in Wave 3, when those children were aged from 21/2 to 4 years, provides an opportunity to assess language development for Indigenous toddlers. Equating language delay as knowing less than 30 words in English, 21% of the toddlers can be classified as having delayed language development for the 794 children for which valid scores for the inventory were available. It should be noted that the Baby cohort in 2010 has a different age range to the Baby cohort in the LSAC in 2006 (2 to 3 years), so direct comparisons between the two groups are not possible.

More importantly, it must be stressed that for many Indigenous children their first languages are traditional Indigenous languages, and English is often their second or even third or fourth language. In this sample, 26% of parents reported that their toddler was learning a language other than English. Indigenous toddlers learning a language other than English were around twice as likely to be classified as having delayed English language development (32%) compared to those learning English only (18%).

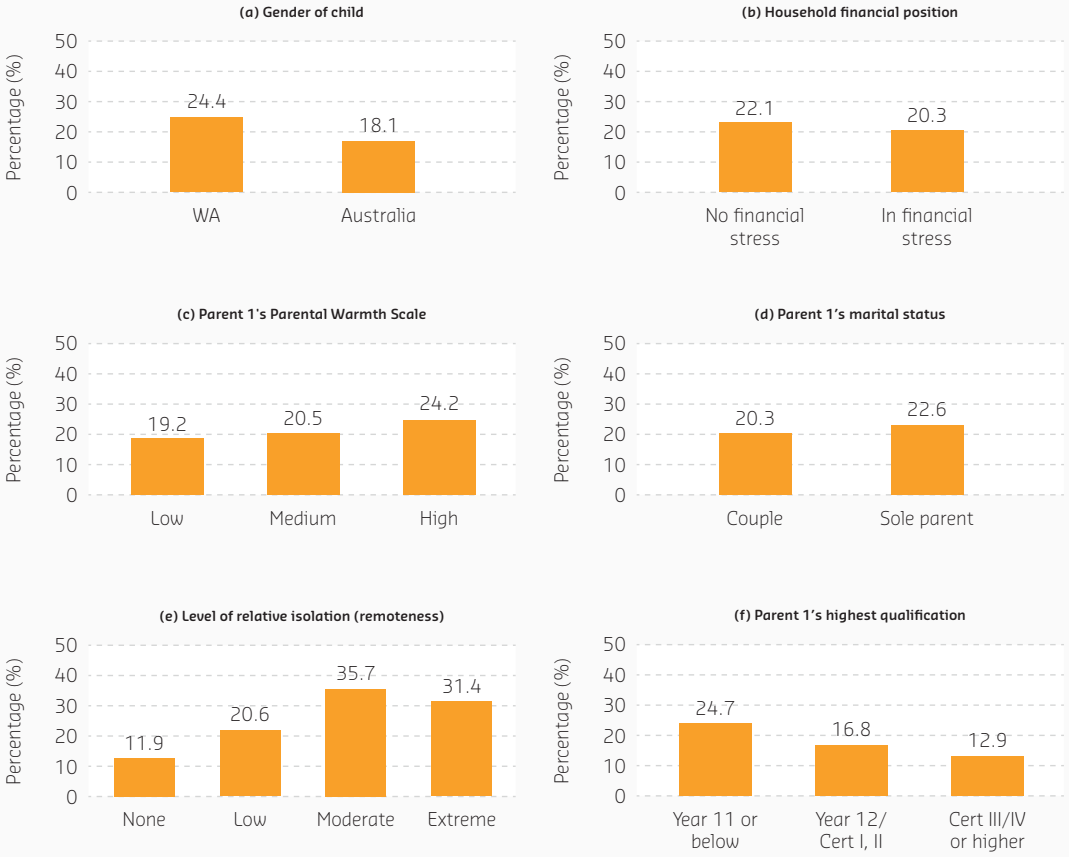
Figure 21 presents the incidence of delays in language development by selected environmental factors. As with non-Indigenous toddlers, boys' language development lags behind that of girls. The gradients suggest language development is less sensitive to key socio-economic background factors than social and emotional adjustment, particularly with respect to the families' financial position and sole-parent status. However, there is again a clear and inverse relationship between the responding parent's level of educational attainment and the study child's language development.

In contrast to social and emotional adjustment, delayed language development appears to increase in prevalence with remoteness. However, this can largely be attributed to the relationship noted above with respect to delayed language development among Indigenous toddlers learning a language other than English. Indigenous children in more remote areas are much more likely to be learning their traditional Indigenous languages as their first language.

Although the data do not allow us to determine which languages children are learning beside English, 50% of Indigenous toddlers living in very remote Australia were learning a language other than English, compared to just 16% in living in non-remote Australia, with that proportion rising steadily with remoteness. Given the importance of traditional language knowledge for cultural identity and the transmission of cultural knowledge, along with evidence of beneficial effects of cultural identity for the wellbeing of Indigenous Australians as noted above, delayed language development in English should not be seen as a negative outcome if it is directly associated with the child also developing bilingual proficiency.

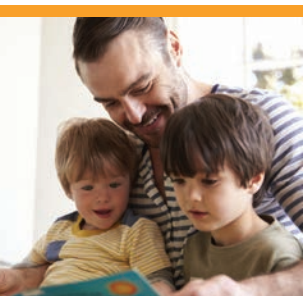
FIGURE 21

The Prevalence of Delays in the Development of Language (Vocabulary) in Indigenous Toddlers by Selected Environmental Risk Factors, Australia, 2010



Source: Bankwest Curtin Economics Centre | Authors' calculations based on data from the LSIC.

SINGLE PARENT FAMILIES



There is no discernible difference in the amount of affection and warmth shown or engagement activities with toddlers between single parent families and other family types.

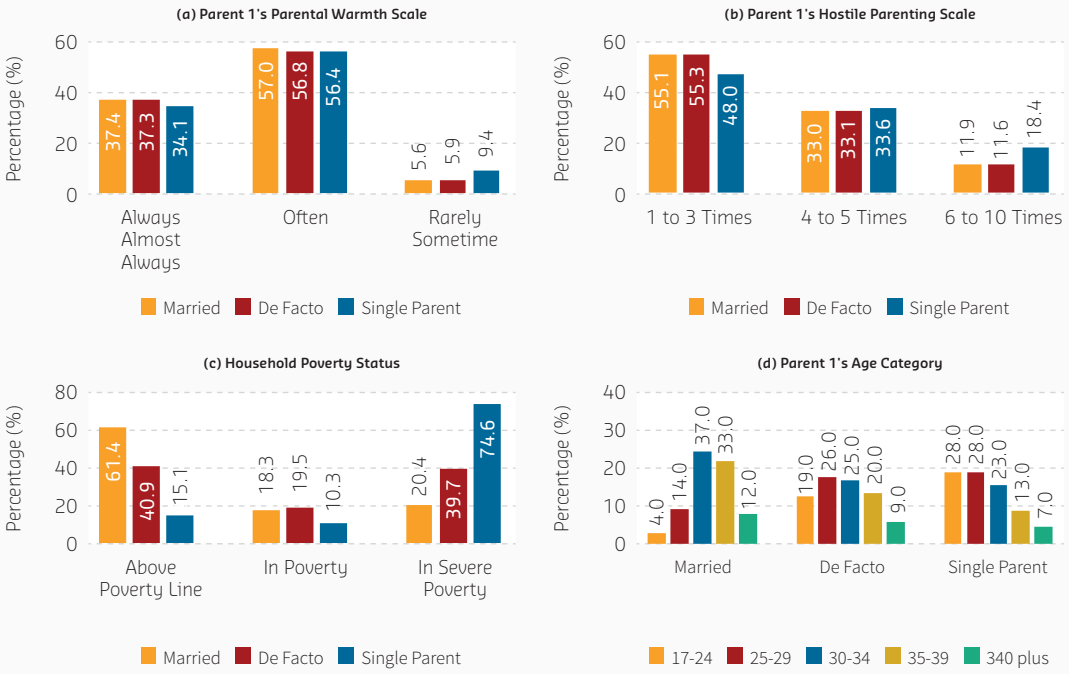
The results from the previous sections suggest that the prevalence of social-emotional competence problems, behavioural problems, and delays in language development amongst toddlers from single parent families was higher compare to other family types. These results need to be interpreted in the context of the environmental risk factors associated with single parents, including lower access to economic and social resources.

Figure 22 presents a comparison of selected environmental risk factors by family type. One of the important points to note from panels (a) and (b) in Figure 22 is that there is very little difference in the levels of parental warmth amongst the different family types. Similarly, there is no substantial difference in the various levels of hostile parenting amongst the various family types. This suggests that the parenting styles and processes of single parents is not a contributing factor in the prevalence of social-emotional competence problems, behavioural problems, or delays in language development amongst toddlers from single parent families. In other words, the results suggest that there is no discernible difference in the amount of affection and warmth shown, or engagement in activities, with toddlers between single parent families and other family types.

As highlighted by the overview of the findings from the literature, poverty is an important contextual factor which has been found to contribute to social-emotional competence problems, behavioural problems, and delays in language development in toddlers. As can be seen from panel (c) in Figure 22, there is a very large difference between the estimated percentage of single parent families living in severe poverty compared to that of other family types in 2006, with the results suggesting that 75% of single parent households lived in severe poverty in 2006 compared to only 20% of married couple families. Furthermore, only 15% of single parent households live above the poverty line compared to 61% of married couple families.

FIGURE 22

Comparison of Selected Environmental Risk Factors by Family Type, Australia, 2006



Note: (1) The three levels of parental warmth (i.e. Always/Almost Always, Often, and Rarely/Sometimes) are related to how often a parent hugs or holds their child; tells their child how happy they make them; has warm, close times with their child; enjoys listening and doing things with their child; feel close to their child when the child is happy and when the child is upset; and expresses affection by hugging, kissing, and holding their child. (2) The three levels of hostile parenting (i.e. 1 to 3 times, 4 to 5 times, and 6 to 10 times) are related to how many times in a six month period a parent has been angry with their child; raised their voice and shouted at their child, the child got on the parent's nerves when the child cried; the parent lost their temper with their child; or left their child alone in the child's bedroom when the child was particularly irritable or upset.
Source: Bankwest Curtin Economics Centre | Authors' calculations based on Longitudinal Study of Australian Children data.

Another environmental risk factor that may also be leading to a higher prevalence of behavioural problems amongst toddlers from single parent families is parental age. For example, the results from panel (k) in Figure 18 suggests that there may be a relationship between parental age and the prevalence of behavioural problems amongst toddlers, with parents age between 17 to 24 and 25 to 29 having the first (37.7%) and second (31.5%) largest estimated prevalence of behavioural problems amongst toddlers.

Similarly, panel (i) in Figure 20 suggests that there may be a relationship between parental age and the prevalence of delays in language development amongst toddlers, with parents age between 17 to 24 and 25 to 29 having the first (29.4%) and second (23.0%) largest estimated prevalence of delays in language development amongst toddlers. This linked with the fact that nearly 60% of single parents in the LSAC data were aged between 17 and 29 (see panel (d) in Figure 22), suggests that parental age may also be a contributing factor in the prevalence of behavioural problems amongst toddlers from single parent families.

SUMMARY

This chapter has focused on the mental health of toddlers including behavioral problems and delays in the development of social-emotional competencies and delays in language development. The focus on toddler mental health is an important issue because there is a reluctance to acknowledge that very young children can and do experience mental health issues that may result in poor early educational outcomes and serious social-emotional, behavioral problems, and poor education outcomes in adolescence and adulthood. Furthermore, it requires a workforce that is skilled in screening, detecting and intervening with parents, their young children and the broader community.

In examining mental health issues among toddlers, we found there to be only very limited data on the prevalence of mental health issues for Western Australian or Australian children aged 0 to 5 years.

The review of the research literature found that there are a number of biological and environmental risk factors that predispose children to social-emotional and behavioral problems in very early childhood. These environmental risk factors include attachment, parental warmth, hostile parenting, parental mental health, parental alcoholism, poverty, socio-economic status, parental level of education, parental adverse childhood experiences, and family structure.

It was estimated that nearly 1 in 4 toddlers in WA were estimated to have behavioural problems, and around 1 in 6 toddlers had social-emotional competence problems, in WA in 2006. In Australia, parental warmth had the largest estimated effect on the prevalence of social-emotional competence problems, with 43.8% of toddlers, whose primary caregiver only rarely/sometimes showed affection, warmth, or engaged in activities with their child, estimated to have social-emotional competence problems. Hostile parenting had the largest estimated effect on the prevalence of behavioural problems, with 46.3% of toddlers, whose primary caregiver had 6 to 10 hostile parenting incidents over a six-month period, estimated to have behavioural problems.

The review of the research literature also found that the development of language by toddlers is also influenced by a number of environmental risk factors, as well as by innate abilities. Some of the of environmental risk factors that have been found to affect the development of language by toddlers include parent-child communicative interaction, parental stress, low parental education, low parental expressiveness, poverty, and family socio-economic status.

In WA, 1 in 5 toddlers were estimated to have delays in language developments in 2006. In Australia, severe poverty had the largest estimated effect on the prevalence of delays in language development, with 29.7% of toddlers from households living in severe poverty estimated to have delays in language development. Parent level of education had a similar effect on the prevalence of delays in language development, with 29% of toddlers, whose primary caregiver's highest level of education was Year 10 or below, estimated to have delays in language development.

Finally, the estimated prevalence of behavioural problems and social-emotional competence problems in WA, even though dated, and the review of the research literature provide evidence of the importance and benefits of investing in the early detection and treatment of mental health issues in very young children. For example, in relation to school readiness, there is a growing body of research evidence which suggests that children with mental health problems are more likely to achieve poorer academic outcomes. In addition, there is an increasing recognition of the importance of early academic skills for later academic achievement. Mental health issues in very young children may also result in serious social, emotional or behavioural problems in adolescence and adulthood.

In terms of the benefits of investing in the early detection and treatment of mental health issues in very young children, the review of the literature revealed evidence indicating that the early detection and intervention of children with mental health problems can have a positive impact on the trajectory of common social and behavioural problems. In addition, and most importantly, the findings from a number of studies suggest that the personal benefits, social benefits, and government savings associated with intervening early in a child's life clearly outweigh the costs. The lack of investment defies the strong research base that has shown for many years the benefits of investing in early childhood development.

From a policy perspective, there is substantial evidence that suggests there are significant personal, social and economic benefits in establishing early relational health and breaking the cycle of disadvantage across generations. This could be achieved by:

- Intervening at the earliest possible point in the life of the child;
- Offering a range of multigenerational (parent and infant/very young child) psychological supports that build families resilience and strength and enables relationships between children and their parents to thrive;
- Harnessing the opportunity to connect and support vulnerable families during the major life transition of becoming a parent (where a parent's motivation to improve their own mental health and build a positive life for their child/children and family is high); and
- Offering a range of evidence-based innovative interventions in collaboration with families to improve their emotional well-being as they transition to parenthood.

Through building a strong foundation of positive mental health and emotional well-being in families through international evidence-based practices, there is potential to make a significant systemic contribution in reducing:

- The burden of childhood and parental mental health issues;
- The loss of productivity across the lifespan; and
- Imposed costs across the life course related to educational attainment (rates of behavioural, learning and social problems, school absence and school expulsion), emotional development (self-regulation, emotional adaptability, relating to others, and self-understanding) and health and criminal justice system expenditure.

PRE-SCHOOLERS

INTRODUCTION

The ages between three and five years are a time when children really start to become little people, inquisitive about the world around them, having far greater independence in everyday tasks and forming relationships with other children their own age .

The ages between three and five years are a time when children really start to become little people, inquisitive about the world around them, having far greater independence in everyday tasks and forming relationships with other children their own age (Early Years 2012).

They will generally be asking many questions and wanting more detailed answers, absorbing more and more information and starting to develop specialised interests. Physically, they will be running, jumping and climbing, independently feeding and dressing themselves and taking themselves to the toilet – with night training also developing (Early Years 2012). Their friendships start to become more complex as they become more empathetic and caring, and have greater awareness of friendship dynamics. Imagination and attention span are also increasing, with character roles and pretend part of their everyday play. Children at this stage are also starting to understand letters and numbers and can count to ten, tell stories and take part in conversations (Early Years 2012).

This developmental stage -the preschool years– provides the starting blocks for young children as they enter into their first year of full time schooling. Children who are behind developmentally are more likely to be challenged in this first year. Earlier detection and intervention to support very young children and their families can prevent and minimise these challenges, giving children the best start to their full-time schooling years.

EARLY CHILDHOOD EDUCATION AND CARE

The importance of the early years in influencing outcomes in later life has been well considered. What happens to a child in their first few years of life, their physical health, the connections they form, the resources they have access to and the early education and care they receive can have lasting impacts on their future outcomes.

This knowledge has led to an increased policy focus and investment in younger children, especially in relation to early intervention, childcare and education. In Australia, this policy focus saw the Council of Australian Governments introduce the National Early Childhood Development Strategy in 2009, with an overarching goal to ensure that "by 2020 all children have the best start in life to create a better future for themselves and the nation" (COAG 2009).

The Strategy comprised a number of initiatives including a National Partnership Agreement on Early Childhood Education, an Early Years Learning Framework, Closing the Gap initiative and National Framework for Protecting Australia's Children. The Strategy also incorporated a number of initiatives that link closely with child wellbeing, including a national plan to reduce violence against women and children and paid parental leave entitlements.

Young children are now expected to be accessing at least 15 hours of formal preschool education each week in the year before commencing school under the National Partnership Agreement within the COAG Strategy.

In this chapter, we look at how well Australian states and territories are performing when it comes to access to preschool for children in their year before school, and earlier, and how this access varies for different equity groups and over time. We also assess the developmental outcomes for these children in their first year of schooling through the Australian Early Development Census. This chapter prefaces our BCEC Early Learning Disadvantage Index which follows in the next chapter.

Children should be accessing at least 15 hours of formal preschool each week in the year before school.

PARTICIPATION IN EARLY CHILDHOOD EDUCATION AND CARE

Very few children under 1 years old are cared for in a formal setting, however the share has doubled in the last six years from 6.6% to 12.3%.

Participation in formal Early Childhood Education and Care (ECEC) has increased significantly over time, with greater government support and investment in childcare, together with increased labour force participation of mother's playing a significant role.

Coinciding with increased demand for formal ECEC, there is a growing body of research analysing the impact of Early Childhood Education and Care (ECEC) on child wellbeing and development[7]. Within the Australian context, there are consistent findings that ***quality formal care improves development, school readiness, and future success among children*** (see for example, Bernal & Keane, 2007; Bryson *et al*., 2012; Hansen & Hawkes, 2009; Felfe & Lalive, 2018; Sincovich *et al*., 2020).

Quality, accessible and affordable childcare is also found to benefit parents – especially mothers – allowing for increased opportunities to participate in the workforce (Apps *et al.*, 2016; Breunig and Gong xxxx; Daley & Mcgannon 2014; Joseph and Mueller, 2019). This has been the primary goal of childcare subsidisation since it was introduced (Logan *et al.*, 2013; Productivity Commission, 2014).

Figure 23 shows the proportion of children who were in some form of ECEC from birth to age 12 in 2011 and 2017. For children under the age of 1, the use of formal care most children are still being cared for by parents or other family members (informal carers) and very few are cared for in a formal ECEC setting. However, there has been a substantial increase in babies (aged 0-1 years) use of formal care, almost doubling from 6.6% to 12.3% between 2011 and 2017.

The proportion of children in formal ECEC continues to increase until it peaks when children reach the age of four (87%) – coinciding with preschool. Formal ECEC participation then falls as children age, reaching 37 per cent at age five and only 6 per cent when children are 11 years old and reaching the end of primary school. Over time, the proportion of children in a formal ECEC setting has increased, particularly for primary school aged children.

Mirroring the increase in formal ECEC for children aged under five, there has been a slight decrease in informal care use for this age group when comparing 2011 and 2017. The pattern however is quite different for children aged 5-11, with informal care increasing considerably. Overall, the combination of changes in patterns of both formal and informal ECEC have led to an increase in use across most age groups, but particularly for children of primary school age.

7 ECEC is primarily made up of Long day care, Outside-school-hours care and Preschool (Baxter, 2015), but can also include home-based care and residential care such as nurseries.

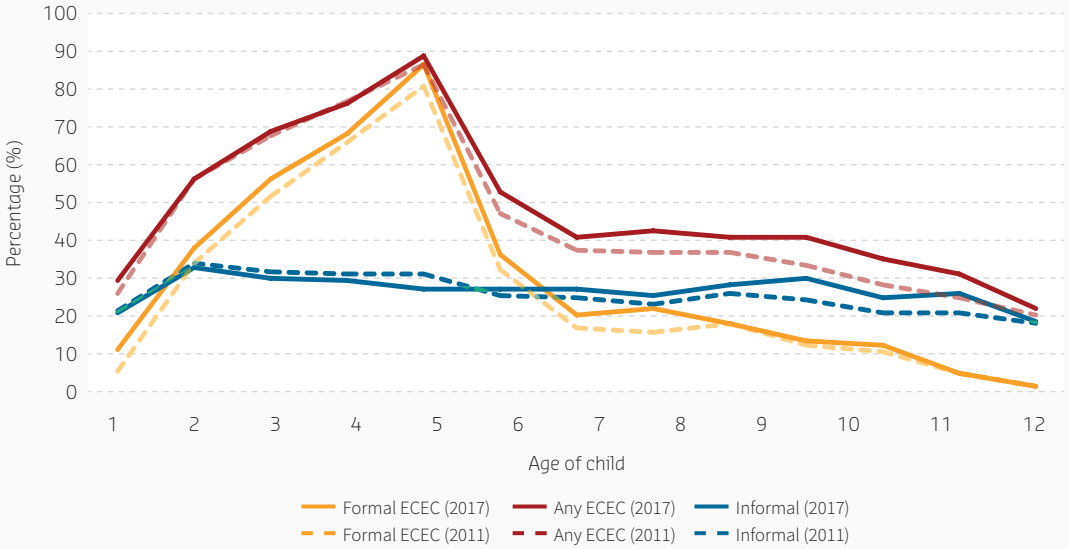
The proportion of children in formal ECEC continues to increase until it peaks when children reach the age of four (87%) – coinciding with preschool. Formal ECEC participation then falls as children age, reaching 37 per cent at age five and only 6 per cent when children are 11 years old and reaching the end of primary school. Over time, the proportion of children in a formal ECEC setting has increased, particularly for primary school aged children.

Mirroring the increase in formal ECEC for children aged under five, there has been a slight decrease in informal care use for this age group when comparing 2011 and 2017. The pattern however is quite different for children aged 5-11, with informal care increasing considerably. Overall, the combination of changes in patterns of both formal and informal ECEC have led to an increase in use across most age groups, but particularly for children of primary school age.

Children are most likely to be in formal early childhood care and education at age 4.

FIGURE 23

Participation in Early Childhood Education and Care, Age of Child, 2011 and 2017



Notes: Analysis inspired by Baxter J (2015). Other care includes family day care and occasional care. Children can also receive preschool education within a child care setting. Children can attend multiple ECEC settings.
Source: Bankwest Curtin Economics Centre | Authors' calculations from ABS CEaCS, 2011 & 2017 (derived from TableBuilder).

Across Australia, children participating in a standalone preschool setting has decreased over time.

Preschool access peaks at age 4 year but spans ages 3 to 5 years.

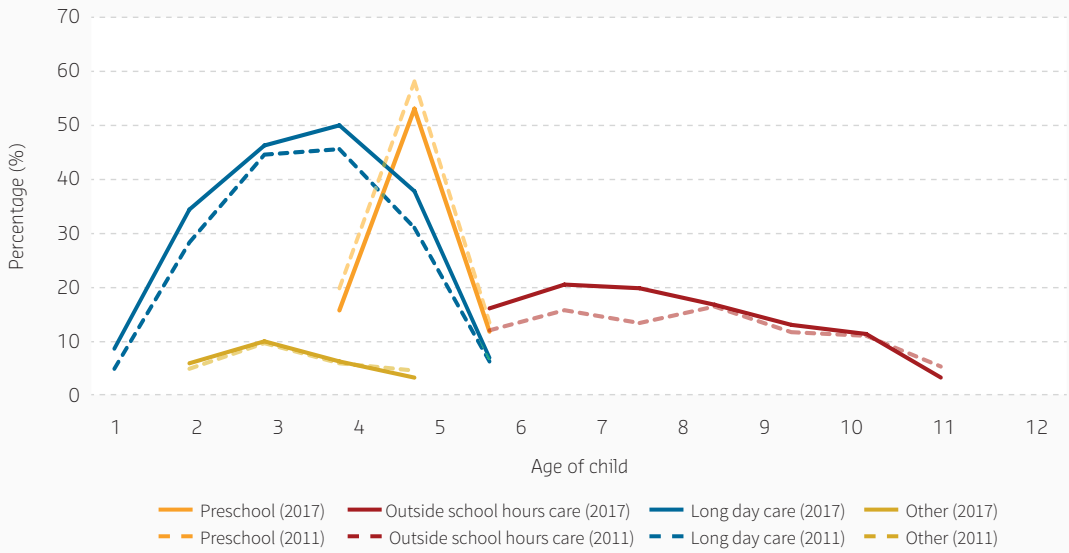
Figure 24 shows children's participation in different types of formal ECEC, highlighting the type of care setting are the key contributors to age patterns. Between the ages of 0 and 3 years, long day care was the most commonly used formal ECEC arrangement in both 2011 and 2017, with 34 per cent of one year olds, 46 per cent of two year olds, and almost 50 per cent of three year olds using this type of care in 2017.

Long day care use begins to fall at the age of four (38%), reaching its low point at the age of five (7.7%) as children transition to preschool and school arrangements. Preschool becomes available to children in the year or two before they begin full-time schooling, depending on which state or territory they reside in (Baxter 2015). Accessing preschool through a long day care centre will also increase the likelihood of younger children accessing a preschool program. As such, preschool attendance spans ages 3 to 5 years, peaking at the age of four. Across Australia, children participating in a standalone preschool setting has decreased between 2011 and 2017, illustrating the substitution effect long-day care centres are having in providing a preschool program within their centre. From the age of 5-12, outside school hours care is the only type of formal care available to children.

Long day care participation has increased for all applicable ages since 2011, with four year olds seeing the largest participation growth (+6.6ppt), followed by 1 year old's (+5.7ppt). This has been the key driver of overall formal ECEC growth for these ages, with preschool participation falling for all ages and other care remaining relatively stable.

FIGURE 24

Participation in formal Early Childhood Education and Care, Age of Child, 2011 and 2017



Note: Analysis inspired by Baxter J (2015). Other care includes family day care and occasional care. Children can also receive preschool education within a child care setting. Children can attend multiple ECEC settings.
Source: Bankwest Curtin Economics Centre | Authors' calculations from ABS CEaCS, 2011 & 2017 (derived from TableBuilder).

PRE-SCHOOL ACCESS AND EQUITY GROUPS

Preschool education programs help provide children with the learning foundations and skills they need to enter their first year of formal schooling. Recent findings from the Australian Early Development Census (AEDC) have revealed that children who attended preschool were less likely to be developmentally vulnerable across all five key child development domains in their first year of schooling (AEDC 2015a).

Under the National Partnership Agreement, young Australian children are now expected to be accessing at least 15 hours of formal preschool education each week in the year before commencing full-time schooling, with the Commonwealth government providing additional funding to states and territories to deliver on this policy.

Since 2008, the Commonwealth government has invested $4.2 billion in preschool programs under the National Partnership Agreement, with most states and territories matching Commonwealth contributions[8]. The strategy also includes a focus on increasing participation for Indigenous, disadvantaged and vulnerable children throughout Australia. The result of this investment and national policy initiative has seen a considerable increase in both enrolments and participation in early childhood programs over time.

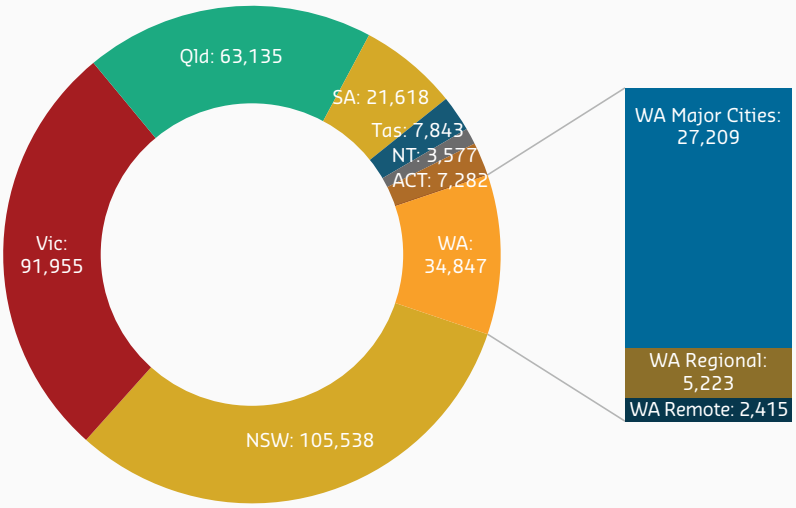
In 2019, there were 335,804 children aged 4 or 5 years enrolled in a preschool program across Australia (Figure 25). A breakdown by jurisdiction shows the number of children enrolled generally aligns with the relative population in each state and territory. More than 100,000 children were enrolled in NSW, 91,955 in Victoria and 63,135 in Queensland. WA is providing preschool to 34,852 children and South Australia 21,618. Smaller states and territories.

Children who attend preschool in the year before schooling are less likely to be developmentally vulnerable in their first year of school..

In 2019 there were over 335,000 children enrolled in a preschool program across Australia and almost 35,000 in Western Australia.

FIGURE 25

Preschool enrolments, states and territories, 2019



Source: Bankwest Curtin Economics Centre | ABS Cat No.4240.0 Preschool Education Australia 2019.

8 The ACT is the exception, where the estimated budget is significantly higher than Commonwealth contributions.

WA has the lowest proportion of children enrolled in centre-based day care preschool programs, at only 6%, compared to 50% nationwide.

Patterns of children's enrolment in preschool by service provider have changed significantly in recent years (Figure 26). At the national level, enrolment in preschool programs through standalone preschools have fallen from 55% in 2013, to 40% in 2019, while children enrolled in preschool programs in centre based day cares have been increasing, from 42% to 50%. Similarly, the proportion of children enrolled in preschool programs across more than one provider type has also seen a significant increase, from 3% in 2013 to 10% in 2019.

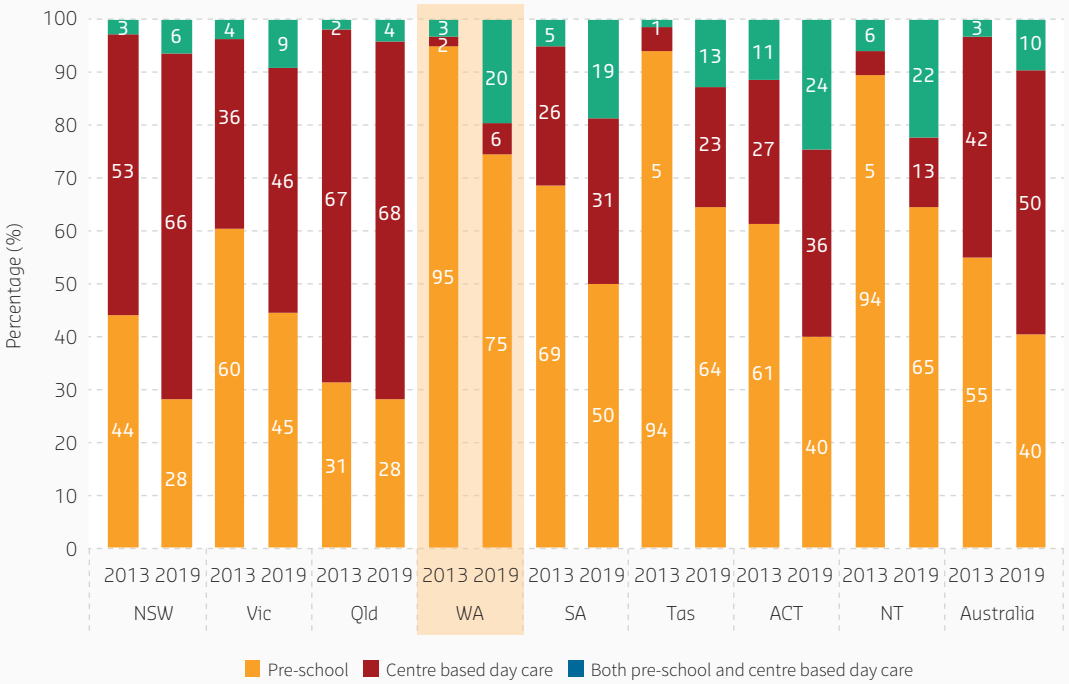
Most states and territories have followed national trends, but a number still differ significantly. In WA, 75% of children are enrolled in a standalone preschool programs – the highest of all states and territories – and 35ppts above the national average. WA also has the lowest proportion of children enrolled in centre-based day care preschool programs, at only 6%, compared to 50% nationwide. This is an outcome of the WA funding model, which gives exclusivity to government and non-government schools with a preschool on site. Centre-based long day care centres are consequently locked out of Universal Access funding and are less likely to deliver a preschool program, requiring a qualified preschool teacher. Tasmania applies a similar funding model and the Northern Territory also restrict access to long day care centres through annual grants.

The exclusivity of the preschool funding model together with demand for more hours of ECEC has likely led to the increase we can observe in children enrolled across more than one provider type from 3% to 20% and a subsequent decrease in the proportion of children enrolled in a standalone preschool from 95% to 25%. Children enrolled in preschool programs solely within a centre-based day care have seen very little change, increasing from 2% to 6% in the last six years.

Tasmania and the Northern Territory and WA have all had very similar enrolment shares in the past – all recording over 90% of children enrolled in standalone preschools in 2013. But, unlike WA, both of these jurisdictions have seen noticeable increases in children enrolled in centre-based care preschool programs over the period to 2019. However, both Tasmania and the Northern Territory still have relatively high proportions of enrolments in standalone preschool programs and low enrolments in centre-based day care where children have access to a preschool program. Queensland is the only state to have seen very little change since 2013, with enrolments in all three sectors seeing very marginal changes.

FIGURE 26

Preschool enrolments by service provider, state and territories, 2013 and 2019



Source: Bankwest Curtin Economics Centre | Australian Bureau of Statistics Cat No. 4240.0

EQUITY GROUPS

Not all children are accessing preschool at the same rate as their representation in the community..

Children from a non-English speaking background have the most inequitable outcome when it comes to preschool enrolments at the national level.

In this section we assess preschool access among equity and special needs children across Australia's states and territories and how this has changed over time using. This includes children from a non-English speaking background, children living in regional and remote areas, children living in lower socio-economic areas and children with a disability.

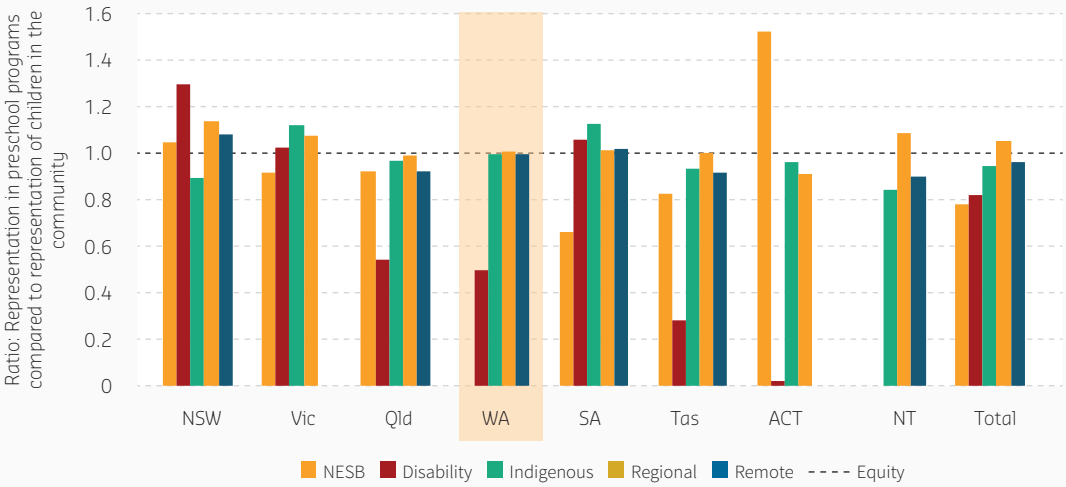
We use an equity score to assess access, where one indicates equal representation of the group relative to their representation in the community. Scores below one represent unequal outcomes. It is important to note that a number of limitations exist with comparisons between states and territories and the underlying data used to assess the level of equity that exists between special needs groups and their access to universal preschool. The number of data points in Figure 27 where the equity ratio exceeds one demonstrates the challenges with data collection and comparisons

Children from Non-English Speaking Background

Language forms an integral communication tool for early learning. Proficiency in the core language used within a society will provide the foundation skills needed for early learning and development. Data for children from non-English speaking backgrounds (NESB) are not always comparable across jurisdictions and are incomplete for the current reporting period. With these limitations in mind, NESB children have the most inequitable outcome when it comes to preschool enrolments, with an equity ratio of 0.78 at the national level. SA has the lowest equity ratio for this population by a significant margin at 0.66. Remaining states and territories all recorded NESB equity ratios above the national average, with the highest ratio being seen in the ACT at 1.52.

FIGURE 27

Equity Ratio: Preschool enrolment for special needs groups, states and territories



Note: Equity ratio equals enrolment share divided by population share. Enrolment does not always equate to attendance. NESB = Non-English Speaking Background. State statistics are not directly comparable for some special needs groups and a number of challenges with consistent data collection exist. NESB enrolment data are not available for WA and NT.
Source: Bankwest Curtin Economics Centre | Productivity Commission ROGS 2020, Table 3A.13.

Children with a Disability
States and territories do not use a consistent measure of disability in assessing access for this equity group, which signals a gap in data collection but also the limitations of comparing jurisdictions. Noting these limitations, children with disabilities tend to have lower representation in preschool enrolments compared to their representation in their respective states and territories. This is particularly apparent for the ACT, with an equity ratio of 0.02, as well as TAS, WA and QLD with equity ratios of 0.28, 0.5 and 0.54 respectively. NSW, VIC and SA all have equity ratios above parity, driving the national equity ratio for children with disabilities to just over 0.8.

Indigenous children
The representation of indigenous children in preschool enrolments is relatively high, with a national equity ratio of 0.94 – slightly below parity. VIC and SA have the strongest representation of Indigenous children with both having an equity ratio over 1. WA also has strong enrolment equity with an almost 1 to 1 representation of Indigenous children enrolled in preschool relative to their population. The NT has the lowest equity ratio for Indigenous children at 0.84, while all remaining regions have equity ratios of around 0.95 and up.

Children living in Regional Areas
The recent *Closing the Gap in Partnership National* Partnership Agreement sets a target of 95% of Indigenous children enrolled in early childhood education in the year before full-time schooling by 2025 (PM&C 2020). Children living in regional areas are typically well represented in preschool, with representation reaching parity or above in most states and territories. Children living in remote areas across Australia also have relatively high representation in preschool relative to the population. NSW, SA and WA all have representation equal to or above parity, with the remaining states and territories also having quite strong equity ratios of 0.9 and above.

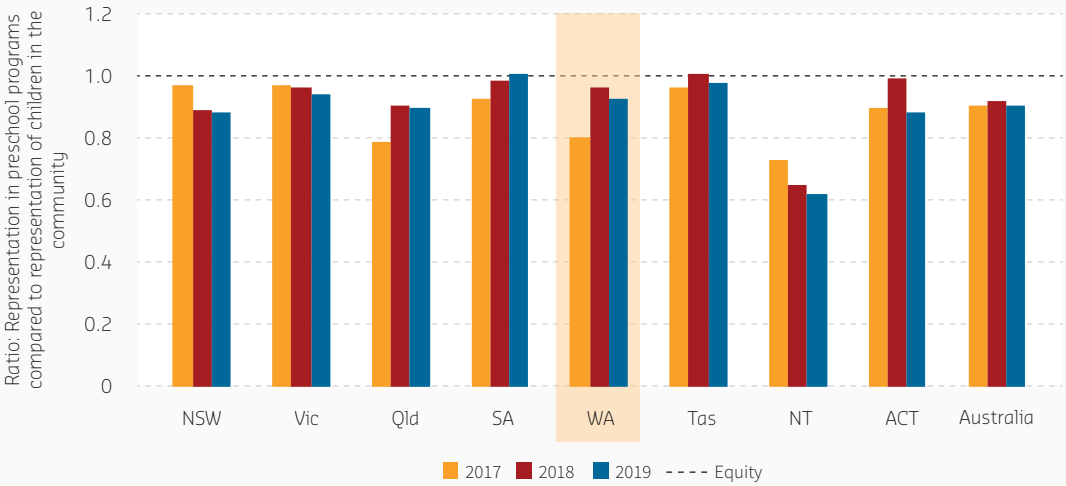
Socio-economic status
Turning to preschool attendance rates, children living in more disadvantaged areas are under-represented in pre-school compared to their representation in the community (Figure 3). South Australia and Tasmania are the only two states to have achieved parity at some point over the reference period, with the proportion of children from a low socio-economic background attending preschool at or above the proportion in the state. South Australia has been the most consistent performer in recent years, with their equity ratio currently sitting at parity – the highest among all states and territories. Notably, Western Australia has seen strong improvements since 2017, moving from being one of the worst performing states to being above the national average. On the other hand, NSW has seen the opposite trend – moving from being the top performing state to being below the national average.

The Northern Territory has performed the worst among all states and territories, with an average equity ratio of 0.67, and has seen a noticeable worsening in their equity ratio over the 2017-19 period. The Northern Territory also has a high community representation of disadvantaged children according to the SEIFA index – sitting at 29.4% in 2018. This is second only to TAS, where 34.5% of all 4-5 year olds are considered to be disadvantaged. The community representation of indigenous children is also significantly higher in the Northern Territory than anywhere else, sitting at 39.5% compared to the national average of 5.8% Victoria is a consistent top performer, with equity ratios for low SES students consistently being at around 0.94 or above, however, Victoria is also starting from a position where there are far fewer children from a low SES background living within the State – 15.8 per cent compared to 19% of children nationally.

Western Australia has seen the strongest improvement in preschool access for children living in low socio-economic areas – increasing by 11.8ppt.

FIGURE 28

Equity Ratio: Preschool attendance for disadvantaged children, states and territories



Notes: Equity ratio equals enrolment share divided by population share. A population share is not included for 2019, and is instead based on the 2018 population share. Enrolment does not always equate to attendance. Disadvantage is defined to be children residing in an area with a Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socio-Economic Disadvantage (IRSD) quintile of 1.

Source: Bankwest Curtin Economics Centre | Preschool Education Australia ABS Cat No. 4240. Productivity Commission ROGS 2020 Table 3A.14.

ACCESSING UNIVERSAL EARLY CHILDHOOD EDUCATION – 15+ HOURS

Children may be enrolled in preschool but not all children are accessing 15 hours per week in the year before school as supported by the National Partnership Agreement. A number of barriers to access can exist including the availability of hours that align with a family's needs and other commitments; the cost of preschool along with any activity tests that need to be met to access a preschool program within a formal centre care setting.

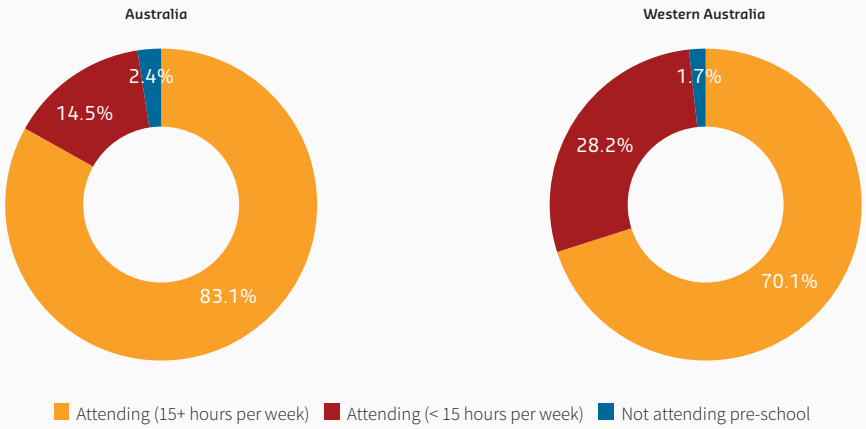
Of those children enrolled in preschool across the nation in the year before commencing formal schooling, over 97 per cent were also attending for at least one hour in the reference week on latest data (Figure 29). Around 83% of children enrolled in preschool were accessing 15 or more hours each week, a further 2.4 per cent were not in attendance, and one in seven were attending less than the prescribed 15 hours each week.

The number of children in Western Australia both enrolled and attending preschool in the year before full-time school was slightly higher than that seen at the national level, with over 98% attending at least one hour in the data collection reference week. However, the proportion of WA preschool children attending for more than 15 hours per week was significantly lower than national levels (28.2% compared to 14.5%). This means that only around 70% of children enrolled in the year before full-time school were attending preschool for the prescribed 15 hours per week in Western Australia, compared to the national average of 83%.

Nearly 30% of children enrolled in preschool are accessing less than 15 hours of preschool each week in the year before commencing formal schooling in Western Australia.

FIGURE 29

Attendance at preschool for those enrolled in year before schooling, 2019



Source: Bankwest Curtin Economics Centre | Authors' calculations from ABS Cat No.4240.0 Preschool Education, Australia, 2019.

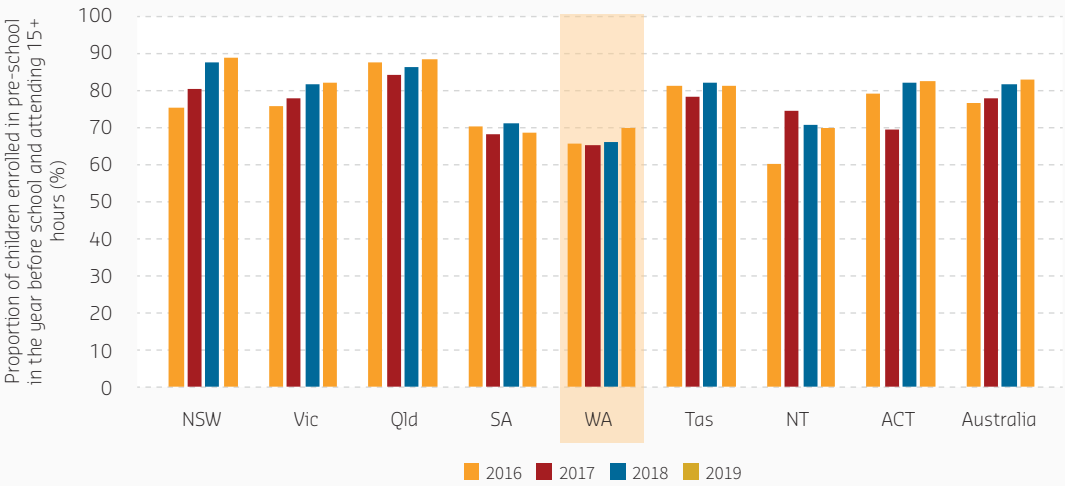
WA saw the strongest improvement in the number of children accessing preschool in the year before full-time school between 2018 and 2019 (+4ppt).

While most states and territories are reporting well above 90 per cent enrolments in preschool for children deemed to be in their year before formal schooling, attendance for 15+ hours each week is noticeably lower (83%), though this has been increasing across most states and territories (Figure 30). Nationally, since 2016, the proportion of children enrolled in preschool and attending 15+ hours in their year before school has increased from 77 to 83 per cent (Figure 30).

Queensland and NSW lead the way with the highest proportion of enrolled children attending 15+ hours of preschool each week in their year before schooling – 89 per cent in 2019. This is followed by the ACT (82.7%), Victoria (82.3%); and Tasmania (81.3%). SA currently has the lowest proportion of enrolled children attending 15+ hours of preschool each week (68.7%), followed closely by WA and the NT (70% each). Although WA has one of the lowest proportions of enrolled children attending 15+ hours of preschool each week, the state has made significant progress over 2018-19, with this figure rising by 4ppt- the largest growth rate recorded among all states and territories during this period.

FIGURE 30

Enrolled and attending 15+ hours of preschool in year before schooling, states and territories



Source: Bankwest Curtin Economics Centre | Authors' calculations from ABS Cat No.4240.0 Preschool Education

INDIGENOUS CHILDREN

Nationally, over 94 per cent of Indigenous children enrolled in a preschool program in their year before formal schooling are also attending. This proportion is slightly lower than non-Indigenous children – 98 per cent (Figure 31). Some states and territories perform well when looking at preschool attendance overall for both Indigenous and non-Indigenous children, however, large gaps appear when assessing attendance by hours each week.

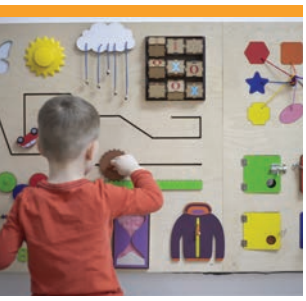
South Australia has similar proportions of Indigenous and non-Indigenous children attending preschool in their year before schooling, however, a larger proportion of Indigenous children are attending for less than the prescribed 15+ hours each week – 47 per cent. This compares to only 27 per cent of non-Indigenous children, with most (72%) accessing 15+ hours of preschool each week.

Western Australia has similar results, with reasonably high access overall, but less so for the prescribed 15+ hours. A further 11 per cent of Indigenous children enrolled in preschool in their year before schooling in WA were not attending any preschool in the reference week. Having said this, the proportion of indigenous children accessing 15+ hours of preschool each week has increased in WA from 49% to 52% between 2016 and 2019. For non-indigenous children the increase has been even larger, rising from 66% to 70% over the same period.

Queensland is performing the best when it comes to indigenous children accessing 15+ hours of preschool in their year before schooling, with 85% attending 15+ hours of preschool, followed by NSW with 80%. In terms of Non-Indigenous children, QLD and NSW hold the highest rates of those attending 15+ hours of preschool, at around 90% each. The NT is the worst performer in indigenous attendance of 15+ hours of preschool per week (43%), but is one of the top performers in non-indigenous children attendance (84%).

The Northern Territory has the biggest divide between non-Indigenous and Indigenous children accessing both preschool overall and 15+ hours of preschool each week for children in their year before schooling. Over 1 in 4 Indigenous children enrolled in preschool in the Northern Territory are not accessing any hours in their year before formal schooling. Of those that are attending preschool, non-Indigenous children are far more likely to be accessing 15+ hours each week (84%), compared to only 43 per cent of Indigenous children.

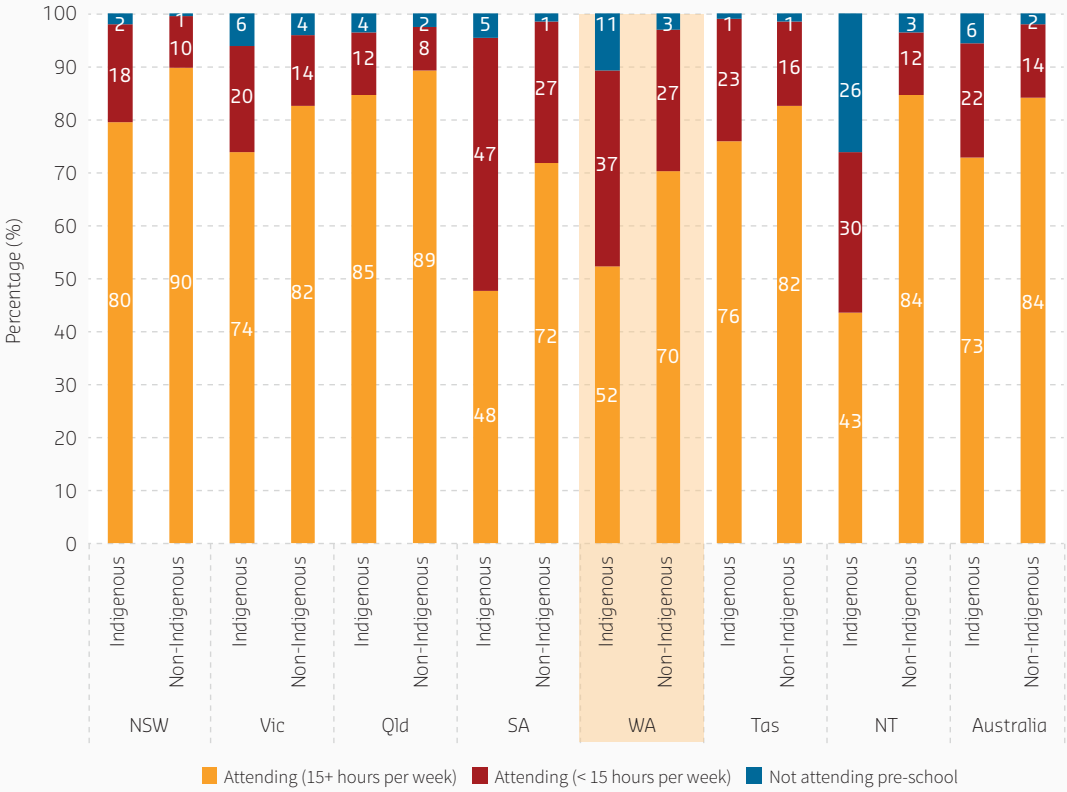
Large gaps appear when assessing preschool attendance by hours each week.



Only 1 in 2 Indigenous children in WA are accessing 15+ hours of preschool each week, compared to 70% of non-Indigenous children.

FIGURE 31

Attendance at preschool for those enrolled in year before schooling, Indigenous status, 2019



Source: Bankwest Curtin Economics Centre | Authors' calculations from ABS Cat No.4240.0 Preschool Education.

DEVELOPMENTAL OUTCOMES AND EQUITY GROUPS

As part of the commitment to ensuring children have the best start in life, the Australian government funded the roll out the Australian Early Development Census (AEDC) in 2009, which provides a national measure of children's development in their first year of schooling (Department of Education and Training, 2018). This data collection has already revealed a positive association between preschool attendance in the year before schooling and developmental outcomes both in the first year of schooling and in subsequent years (AEDC 2015a; Warren *et al*., 2017; Warren and Haisken-DeNew 2013)

The AEDC is conducted every three years, with teachers completing around 100 questions for each child that provides important information across five key child development domains that provide the foundation for good health, education and social outcomes (Department of Education and Training, 2018). These domains include physical health and wellbeing, social competence, emotional maturity, language and cognitive skills and communication and general knowledge (Table 6).

To date, more than 95 per cent of schools with eligible children participated in each collection and data on over 1.1 million Australian children has been collected. Of this, data on 308,953 children were collected in the 2018 AEDC cycle, with a school participation rate of 96.7 per cent (Department of Education and Training, 2019). To date, more than 96 per cent of schools with eligible children participated in each collection and data on over 850,000 Australian children has been collected (Department of Education and Training, 2019).

TABLE 6

AEDC Domains

Domain	Icon	Description
Physical health and wellbeing		Children's physical readiness for the school day, physical independence and gross and fine motor skills.
Social competence		Children's overall social competence, responsibility and respect, approach to learning and readiness to explore new things.
Emotional maturity		Children's pro-social and helping behaviours and absence of anxious and fearful behaviour, aggressive behaviour and hyperactivity and inattention.
Language and cognitive skills (school-based)		Children's basic literacy, interest in literacy, numeracy and memory, advanced literacy and basic numeracy.
Communication skills and general knowledge		Children's communication skills and general knowledge based on broad developmental competencies and skills.

Source: AEDC Data Guidelines https://www.aedc.gov.au/resources/detail/aedc-data-guidelines-2019.

19.4 per cent of Children in WA in their first year of schooling are developmentally vulnerable on one or more domain(s) .

The scores that each child receives are then assessed against a 'cut-off' for each of the developmental domains and children are graded as being either developmentally on track, developmentally at risk or developmentally vulnerable (Table 7). More information about the scores and cut-off methodology can be found in the Glossary and Technical Notes.

In the latest AEDC collection, 21.7 per cent of children were developmentally vulnerable on one or more domain(s) at the national level, and 11 per cent were developmentally vulnerable on two or more domains. There was a small positive change between 2015 and 2018 for both measures, however, the proportion of children who are developmentally vulnerable on two or more domains has gone up since 2012. Western Australia is performing relatively strongly, with the percentage of children who are developmentally vulnerable on one or more domains being 19.4% – 2.3ppt lower than the national average. The story is similar for the proportion of children who were developmentally vulnerable on two or more domains, sitting at 9.4% in 2018 – 1.6ppt below the national average.

TABLE 7

AEDC domain category

Domain	Description
Developmentally on track	Children who scored above the 25th percentile (top 75 per cent) of the national population.
Developmentally at risk	Children who scored between the 10th and 25th percentile of the national population.
Developmentally vulnerable	Children who scored below the 10th percentile (lowest 10 per cent) of the national population.

TABLE 8

AEDC results for vulnerable Children by Characteristics, 2012, 2015, 2018

Category	Subcategory	Developmentally vulnerable on one or more domain(s) (%)			Developmentally vulnerable on two or more domains (%)		
		2012	2015	2018	2012	2015	2018
Overall	Australia	22.0	22.0	21.7	10.8	11.1	11.0
Overall	Western Australia	23.0	21.3	19.4	11.2	10.5	9.4
Sex	Male	28.2	28.5	27.9	14.8	15.3	15.3
	Female	15.7	15.5	15.3	6.8	6.8	6.7
Indigenous background	Indigenous	43.2	42.1	41.3	26.0	26.2	25.8
	Non-Indigenous	20.9	20.8	20.4	10.0	10.2	10.1
Socio-economic status	Quintile 1 (most disadvantaged)	33.1	32.8	32.3	18.2	18.6	18.5
	Quintile 2	24.5	24.8	24.1	12.2	12.7	12.6
	Quintile 3	20.8	20.5	20.3	9.9	10.0	10.0
		17.7	17.6	17.9	8.0	8.2	8.4
	Quintile 5 (least disadvantaged)	13.8	15.9	14.7	5.7	6.3	6.5
Geographic location	Major Cities	21.1	21.0	20.8	10.1	10.2	10.2
	Inner Regional	22.5	22.5	22.3	11.2	11.8	11.9
	Outer Regional	24.9	25.2	24.6	13.1	13.2	13.5
	Remote	25.7	27.4	26.6	13.1	15.4	14.8
	Very Remote	44.3	46.6	45.5	27.8	31.3	30.3
Language diversity	LBOTE- Total	29.5	27.8	25.7	14.6	14.2	13.1
	Not proficient in English**	93.7	94.1	>90.0	58.0	59.2	59.7
	Proficient in English	20.0	19.1	18.1	8.3	8.4	7.9
	English Only – Total	20.2	20.4	20.3	9.9	10.2	10.4
	Not proficient in English**	93.7	93.8	>90.0	72.3	74.7	76.9
	Proficient in English	17.9	18	18.2	7.9	8.1	8.5

Source: Bankwest Curtin Economics Centre | 2018 AEDC National Report

** Where 90% or more of a population group is considered developmentally vulnerable the vulnerable group is grouped to >90%, this is to prevent identification of individual children as developmentally vulnerable.

Boys were almost twice as likely as girls to be developmentally vulnerable. In 2018, the proportion of boys developmentally vulnerable on one or more domain(s) was 27.9 per cent, compared to only 15.3 per cent of girls (Table 8). While there has been some small improvement over time for both boys and girls, the gap between the two has widened slightly across the same period with boys 2.3 times as likely to be classified as developmentally vulnerable on two or more domains in 2015 and 2018 compared with 2.2 times in 2012.

Indigenous children were more than twice as likely to be vulnerable on one or more domains (41% vs 20%) and 2.6 times as likely to be vulnerable on two or more domains (26% vs 10%) than non-Indigenous children in 2018. The recent *Closing the Gap in Partnership* National Partnership Agreement sets a target of 55% of Indigenous children on track on all five developmental domains by 2031 (PM&C 2020).

HOW DOES WA COMPARE TO OTHER STATES AND TERRITORIES?

Differences in early childhood development are evident across Australia's states and territories, with the demographic profile of children in each state and territory playing a substantial role in the relative advantage or disadvantage children experience.

Western Australia is below the national average on all domains, aside from language where it is the same. Western Australia also has the lowest proportion of children developmentally vulnerable on both one or more and two or more domains. New South Wales and Victoria are also below the national average across all five domains and in the proportion of children that present as developmentally vulnerable on both one or more and two or more domains. Queensland has a higher proportion of children that are developmentally vulnerable across all five domains, averaging around 2 percentage points higher than the national average. Similarly, South Australia is above the national average on all domains, while Tasmania is generally quite close to the national average.

The Northern Territory is the worst performing region across all developmental areas. In 2018, 35.8 per cent of children in their first year of schooling in the Northern Territory were considered to be developmentally vulnerable on one or more domain(s), and 23.4 percent were vulnerable on two or more domains (Table 9). School based language and cognitive skills are the main developmental obstacle for children living in Northern Territory, with almost one in five children developmentally vulnerable on this domain – around three times the national average of 6.6 per cent (Table 9 and Figure 32).

TABLE 9

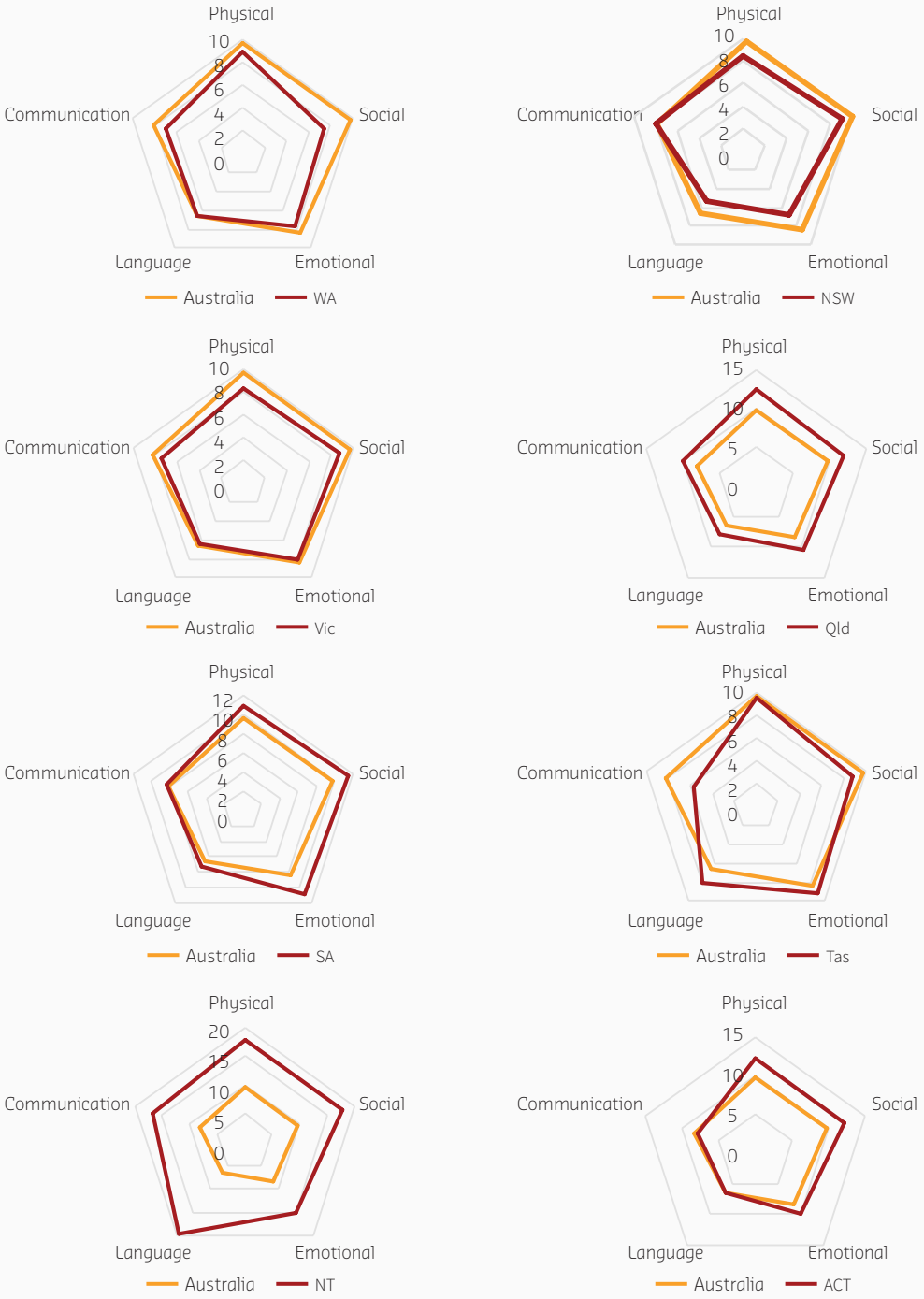
Proportion of children developmentally vulnerable in 2018

State	Physical (%)	Social (%)	Emotional (%)	Language (%)	Communication (%)	Developmentally vulnerable on one or more domain(s) (%)	Developmentally vulnerable on two or more domains (%)
Australia	9.6	9.8	8.4	6.6	8.2	21.7	11.0
WA	8.9	7.4	7.7	6.6	7.0	19.4	9.4
NSW	8.5	9.2	6.8	5.2	8.0	19.9	9.6
VIC	8.2	8.8	8.1	6.4	7.4	19.9	10.1
QLD	12.3	11.9	10.5	8.0	10.1	25.9	13.9
SA	10.8	11.5	10.8	7.2	8.4	23.9	13.0
TAS	9.5	8.8	9.2	8.0	5.7	21.5	10.7
NT	17.6	17.8	14.9	19.6	16.7	35.8	23.4
ACT	12.1	12.3	9.9	6.4	7.8	24.6	12.4

Source: Bankwest Curtin Economics Centre | 2018 AEDC National Report.

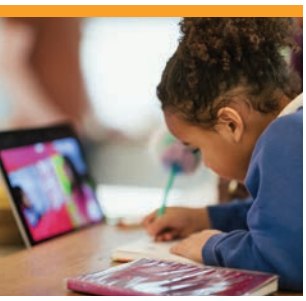
FIGURE 32

Proportion of children developmentally vulnerable by domain, states and territories, 2018



Note: Scales are not presented on a consistent basis due to the much higher proportion of children in the Northern Territory developmentally vulnerable across all five domains.

Source: Bankwest Curtin Economics Centre | 2018 AEDC National Report.



In WA the proportion of children developmentally vulnerable on one or more domains has decreased by more than 3 percentage points between 2012 and 2018.

There was a small positive change between 2015 and 2018 for both measures, however, the proportion of children who are developmentally vulnerable on two or more domains has increased since 2012 (Table 10).

Western Australia has seen a fall in the proportion of children who are developmentally vulnerable on one or more domain(s), recording a 3.6ppt fall between 2012 and 2018.

Most other states and territories remained relatively unchanged on this measure, with the exception of the ACT which saw a significant increase of 2.6ppt. All states and territories recorded increases for the proportion of children who were developmentally vulnerable on two or more domains between 2012 and 2018, with the exception of WA which saw a fall of 1.8ppt – being the key reason why there was only a small increase nationwide of 0.2ppt.

TABLE 10

Percentage of children developmentally vulnerable, 2012, 2015, 2018

State	Developmentally vulnerable on one or more domain(s) (%)			Developmentally vulnerable on two or more domains (%)		
	2012	2015	2018	2012	2015	2018
Australia	22.0	22.0	21.7	22.0	22.0	21.7
WA	23.0	21.3	19.4	23.0	21.3	19.4
NSW	19.9	20.2	19.9	19.9	20.2	19.9
VIC	19.5	19.9	19.9	19.5	19.9	19.9
QLD	26.2	26.1	25.9	26.2	26.1	25.9
SA	23.7	23.5	23.9	23.7	23.5	23.9
TAS	21.5	21.0	21.5	21.5	21.0	21.5
NT	35.5	37.2	35.8	35.5	37.2	35.8
ACT	22.0	22.5	24.6	22.0	22.5	24.6

Note: See Glossary and Technical Notes for further details on AEDC score cut-off points.
Source: Bankwest Curtin Economics Centre | 2018 AEDC National Report

SUMMARY

The preschool years are an important developmental stage for young children, providing a stepping stone into their first year of school and giving children access to important learning, socialisation and development opportunities. Within the Australian context, there are consistent findings that quality formal early education and care improves development, school readiness, and future success among children.

Participation in formal Early Childhood Education and Care has increased substantially over time, driven by a combination of the recognition of just how important early education and care for young children's development together with the importance of women and primary caregivers to access labour market opportunities.

All Australian children in the year before commencing formal schooling should now be accessing at least 15 hours of preschool each week as part of the National Partnership Agreement.

While good progress has been made towards achieving this outcome, gaps remain across states and territories and a level of inequality is apparent for children that are most in need. Children from a non-English speaking background, Indigenous children and children with a disability are not accessing preschool to the same degree as other children their age. The geographical divide is even greater and is highlighted in the next chapter.

Patterns of preschool participation have changed significantly in recent years and nationally, children are more likely to be receiving a preschool program within an early childhood education centre setting, rather than a standalone preschool. This is particularly the case among the eastern states, where centre-based delivery of preschool has increased from 53% to 66% in NSW in the last six years alone.

Western Australia on the other hand, has not seen the same changes and has the lowest proportion of children receiving formal preschool education through centre-based day care - 6% compared to 50% nationally. This pattern stems from the funding model which gives exclusive access to national partnership funding to schools with an on-site preschool.

The exclusivity of the WA preschool funding model, together with demand for more hours of centre-based care is likely to be behind the significant increase in children enrolled across more than one provider type from 3% to 20% over the last six years, with parents having to juggle multiple early education and care arrangements.

Access and participation to early childhood education through preschool has improved considerably in Western Australia over time, particularly in the last two years. Children from low socio-economic areas have increased by more than 10 percentage points and attendance at pre-school for 15 hours each week has increased by 4 percentage points across all groups.

Despite this progress, Western Australia remains substantially behind the national average for both Indigenous and non-Indigenous children accessing 15+ hours of preschool each week. The trajectory is a positive one, and improvements are also appearing through a lower share of children with multiple developmental vulnerabilities in their first year of school. Identification and removal of additional access barriers, which includes the availability of pre-school through centre-based care will likely extend this trajectory.

"BY 2020 **ALL CHILDREN** HAVE THE BEST START IN LIFE TO CREATE A BETTER FUTURE FOR THEMSELVES AND THE NATION" (COAG 2009)."

EARLY LEARNING DISADVANTAGE INDEX

INTRODUCTION

"By 2020 all children have the best start in life to create a better future for themselves and the nation"(COAG 2009).

In recognition of the importance of the early years in influencing outcomes for children the Council of Australian Governments introduced the National Early Childhood Development Strategy in 2009 (COAG 2009).

This strategy included a shared vision from Commonwealth, state and territory governments to commit to an outcome where by 2020 all children would have the best start in life to create better future for themselves. We have now reached this milestone and it's timely to ask the question: ***Do all children in Australia have the best start in life?***

To help answer this question we have developed a geographical index of early learning disadvantage in Australia – the ***BCEC Early Learning Disadvantage Index***, which incorporates measures of access, outcomes and resources.

Crucially, our index is constructed at a granular geographic area. While national and state measures are an important way of judging progress on policy commitments these figures often conceal important differences that exist in smaller communities across Australia.

The key purpose behind this index is to uncover the extent to which inequality in early learning opportunities and outcomes differs across Australia's regions.

We uncover hotspots of high or low early learning disadvantage to support the development of targeted and localised policy initiatives that will improve our early learning outcomes for children, and to better understand the drivers of disadvantage in these areas.

A GEOGRAPHICAL INDEX OF EARLY LEARNING DISADVANTAGE

The BCEC Early Learning Disadvantage Index highlights the extent of inequality of early learning opportunities across WA and Australia.

To construct our index, we have identified a number of indicators that capture key aspects related to a well-functioning early learning system – access to preschool, developmental outcomes and the level of resources a child in the early years has access to. Importantly all indicators are available at a consistent geographically disaggregated level across all areas of Australia.

Access
Preschool education provides the foundational skills children need to prepare them for full-time school and has established links with school readiness (Warren et al. 2017, SCRGSP, 2019). School readiness has been found to set academic trajectories throughout life, and has an important impact on the life course (Brinkman et al. 2013; Heckman, 2008). All children before their year of full-time school should currently be accessing at least 15 hours of preschool each week. Access to preschool is captured by the proportion of three and four year olds enrolled in preschool and the share of children attending preschool for 15 hours a week in their year before full-time school.

Outcomes
Developmental outcomes across physical health and wellbeing, social and emotional competence, language and cognitive and communication skills are all included in the index. Included are the share of children developmentally vulnerable on one or more or two or more of these domains in their first year of schooling. Developmental vulnerability is assessed by the number of challenges that interfere with a child's school day and include behavioural problems, reading and writing challenges and difficulties with speech and understanding.

Resources
Access to a computer and the internet are an increasingly essential tool to enable full participation in education, not having access to the internet can restrict this participation (Abello et al 2016). While there is some debate about the potential negative influences of 'screen time' on child development and wellbeing outcomes, access to the internet as a core tool for early learning and education cannot be denied. This is particularly the case within the context of the COVID-19 pandemic, where many students (preschool included) have migrated to an on-line learning environment.

Resourcing is also captured through the preschool student-to-teacher ratio which measures the number of qualified preschool teachers available to children attending preschool.

TABLE 11

Dimensions of Early Learning Disadvantage

Access	Outcomes	Resources
• Attendance at preschool for 3 and 4 year olds	• Children developmentally vulnerable on one or more domain in first year of school	• Children living in households without access to the internet
• Attendance for 15+ hours at preschool in the year before full-time school	• Children developmentally vulnerable on two or more domains in first year of school	• Preschool student to preschool teacher ratio

These indicators have been validated, tested and combined to construct a geographically detailed index of early learning disadvantage covering all areas of Australia. We use principal components analysis (PCA) to construct the index. The index has been standardised to take on a value of 0 – 100, with 100 being the most disadvantaged and zero the most advantaged.

We then map our index to communities across each of Australia's states and territories using the Statistical Area Level 2 (SA2) geographical classification.

SA2s have been designed to reflect functional areas that represent a community that interacts together socially and economically. Mapping the index gives us a strong visual perspective of the relative advantage and disadvantage experienced by children across Australian states and territories.

We then rank communities within each state or territory in terms of the level of early learning advantage or disadvantage they are experiencing. We also profile the top and bottom areas nationally and within each state to in terms of their economic, social and educational characteristics.

Lastly, the Index is used to assess the key drivers of early learning disadvantage by applying statistical regression and controlling for a number of socio-economic, demographic, educational and geographic variables.

EARLY LEARNING INEQUALITY ACROSS AUSTRALIA

Comparing communities across Australia there is a clear and unambiguous difference in early learning between children living in the most advantaged and disadvantaged regions (TABLE 12).

The divide between the most advantaged and disadvantaged areas is staggering. Children living in communities with the lowest index score (the most disadvantaged areas) are far less likely to be attending preschool, more likely to be developmentally vulnerable, less likely to have access to the internet at home and if they are attending preschool, are generally facing higher student to teacher ratios.

The share of children in their year before full-time schooling accessing less than 15 hours of preschool each week in the most disadvantaged areas is 36.6 per cent, compared to only 3.5 per cent of children in the most advantaged areas, and 14.7 per cent across all of Australia.

This means that children living in the most disadvantaged areas are ten times more likely not be accessing 15 hours of preschool each week in their year before full-time school compared to those in the most advantaged communities. Compared to the national average children in the most disadvantaged areas are two and a half times more likely not to be accessing universal preschool each week in the year before full-time school.

The share of 3 and 4 year olds not accessing preschool at all is also much higher in the most disadvantaged areas. Children in these communities are more than twice as likely not to be enrolled in preschool as children in the most advantaged communities.

Among children that are attending preschool, the ratio of preschool students to teachers is higher in the most disadvantaged communities – 19:1 compared to 15:1 in the most advantaged areas. However, the student-teacher ratio is lower than the national average of 22:1.

Child development outcomes are also much poorer for children in the most disadvantaged areas. Very few children under five in the most advantaged communities are vulnerable across multiple developmental domains.

Only 3.2 per cent of children in the most advantaged areas are vulnerable on two or more domains. This compares with 1 in 2 children in the most disadvantaged areas, and the national average of 11.4 per cent.

Rates of internet access among children in these communities are also much lower with more than 40 per cent of children in the most disadvantaged areas without access to the internet at home, compared to only 1.8 per cent of children in the most advantaged areas.

The most disadvantaged areas are all located in remote and very remote regions of Australia, across both Western Australia and the Northern Territory. There is one exception – Elizabeth in South Australia, a suburb of Adelaide. These areas are also characterised by a high proportion of Aboriginal and Torres Strait Islander children and low English competency among 0-5 year olds.

The link between socio-economic status and early learning disadvantage is evident in these communities. Most are within the lowest SEIFA decile, have access to less than half the equivalised household income, a higher share of single parent families and high rates of inadequate housing.

The rate of homelessness, which includes overcrowding, is 1,225 per 10,000 people in the most disadvantaged regions according to our index, compared with 18 per 10,000 in the most advantaged – almost forty times higher.

High levels of unemployment are also evident in these areas. Halls Creek in WA has an unemployment rate of 41 per cent, compared with 3.2 per cent in Terrey Hills-Duffys Fores in Northern Sydney.

37% of children living in the most disadvantaged areas do not access 15 hours of preschool each week in the year before school, compared to only 3.5% of children in the most advantaged areas.

1 in 2 children living in the most disadvantaged areas are developmentally vulnerable on 2 or more domains compared to the national average of 11.4%.

The most disadvantaged areas are all located in remote and very remote regions of Australia, across both Western Australia and the Northern Territory.

TABLE 12

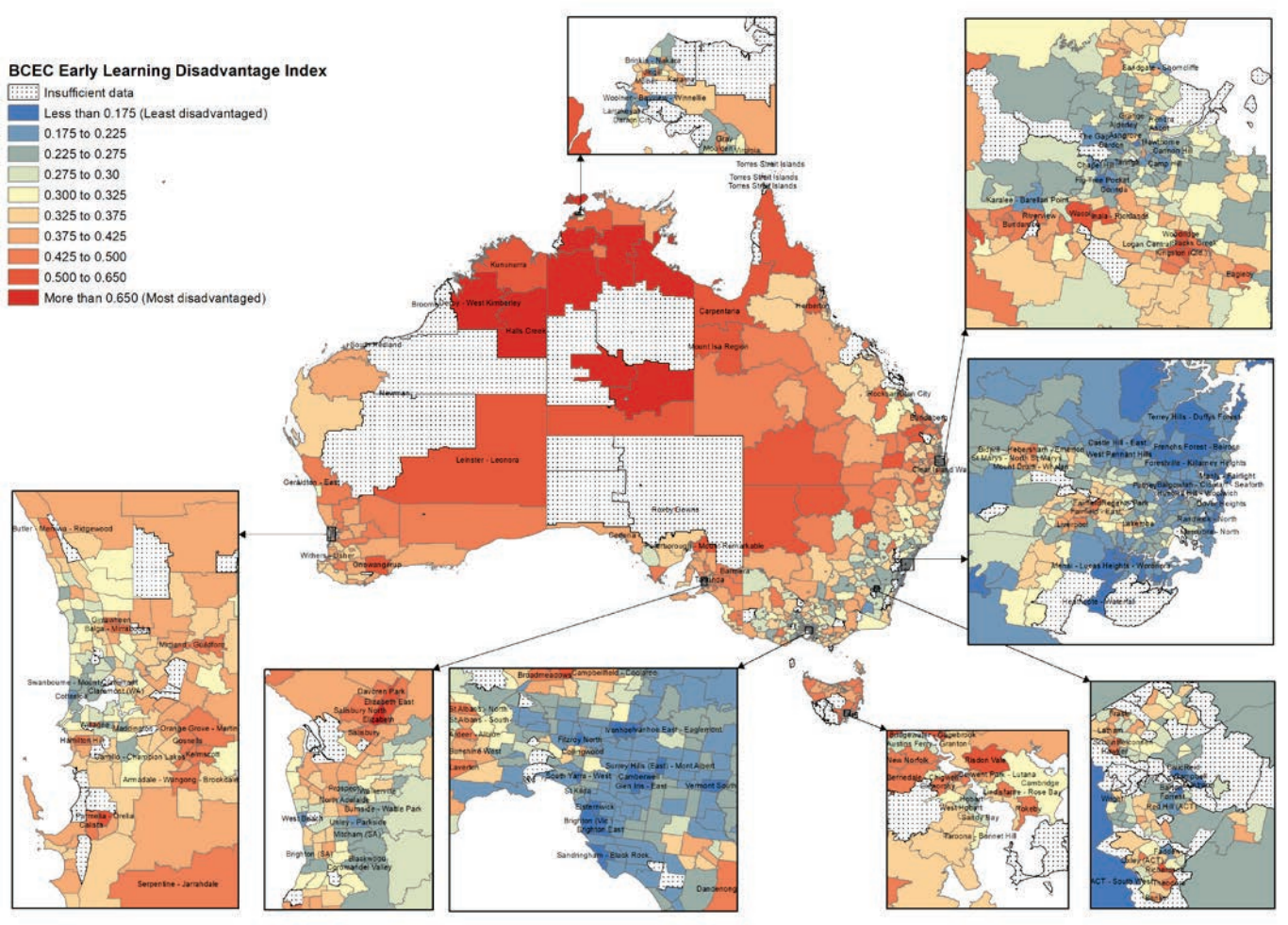
Top 10 and Bottom 10 Areas of Early Learning Disadvantage: Australia

AUSTRALIA				Pre-school attendance				Internet	Child development		School resources	Demographic			Economic resources		Family		Housing			Caring	Population	
	Local area (SA2)	State/Territory	Remoteness	Share in YBFS enrolled in pre-school, not accessing 15+ hours	Share not in YBFS enrolled in pre-school, not accessing 15+ hours	Share of 3 year olds not attending pre-school	Share of 4 year olds not attending pre-school	Share of families with no internet access	Share of children vulnerable on AEDC domains		Pre-school student-teacher ratio (SA3)	Share of ATSI 0-5 year olds	English non-competency among 0-5 year olds	SEIFA score	Average equivalised household income	unemploy-ment rate	Average number of children in family	Share of one-parent families	Share of households under rental stress	Share of households under mortgage stress	Homeless-ness rate	Share of people who care for own children	Population of children in pre-school	Population of 0-5 year olds
	Most Advantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	Terrey Hills - Duffys Forest	NSW	Major City	8.8	9.7	0.0	20.0	1.9	9.3	7.0	15.2	2.2	1.4	1,128	1,258	3.2	2.0	5.7	6.6	9.1	8	22.2	99	225
2	Wamberal - Forresters Beach	NSW	Major City	3.1	10.3	34.9	13.5	3.1	4.9	2.4	20.8	3.3	1.5	1,077	1,020	1.5	1.9	8.1	7.0	8.5	18	23.7	303	736
3	Manly - Fairlight	NSW	Major City	5.2	4.0	37.2	27.7	1.8	6.1	1.3	13.0	0.2	7.2	1,151	1,731	3.0	1.7	5.9	15.2	4.4	49	17.6	426	1,412
4	West Pennant Hills	NSW	Major City	1.8	4.8	36.1	23.0	0.9	9.2	3.9	14.3	0.4	17.4	1,165	1,416	1.7	1.9	4.3	3.4	9.5	10	20.8	250	775
5	Dover Heights	NSW	Major City	0.0	0.0	32.5	22.4	1.6	12.1	5.0	9.0	0.7	6.3	1,152	1,483	2.0	1.8	7.2	16.4	8.1	9	23.8	271	882
6	Forestville - Killarney Heights	NSW	Major City	0.0	9.7	31.1	19.3	1.7	11.2	4.8	15.2	0.7	6.7	1,130	1,204	3.1	1.9	6.6	6.9	7.7	10	26.4	310	881
7	Castle Hill - East	NSW	Major City	0.0	0.0	41.7	44.7	1.4	3.4	0.0	14.3	0.0	12.7	1,091	1,003	1.0	1.9	4.4	5.5	6.4	-	17.0	63	228
8	Menai - Lucas Heights - Woronora	NSW	Major City	5.3	7.8	37.6	19.8	1.9	9.5	2.0	17.4	1.9	3.5	1,102	1,217	2.0	1.9	7.6	4.5	9.0	10	22.1	528	1,446
9	Randwick - North	NSW	Major City	3.9	3.2	44.4	21.9	2.6	7.2	2.2	16.4	1.0	7.2	1,135	1,488	2.2	1.6	8.2	17.3	5.2	63	19.5	391	1,247
10	Hunters Hill - Woolwich	NSW	Major City	7.2	0.0	36.3	21.7	1.6	10.4	3.7	12.1	0.0	8.7	1,151	1,625	3.4	2.0	6.9	7.9	8.2	7	21.1	193	601
	AVERAGE - top 10			**3.5**	**4.9**	**33.2**	**23.4**	**1.8**	**8.3**	**3.2**	**14.8**	**1.0**	**7.2**	**1,128**	**1,345**	**2.3**	**1.9**	**6.5**	**9.1**	**7.6**	**18**	**21.4**	**283**	**843**
	Most Disadvantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	Yuendumu - Anmatjere	NT	Very Remote	36.0	44.1	64.7	41.7	85.2	68.9	53.3	16.9	96.6	70.0	604	464	11.0	2.2	17.2	0.9	0.0	1,678	24.7	109	232
2	Gulf	NT	Very Remote	43.1	42.9	80.4	57.5	42.1	72.7	60.7	11.1	95.2	31.1	695	437	14.8	2.3	19.4	5.1	0.0	2,481	20.9	79	501
3	Halls Creek	WA	Very Remote	24.6	16.7	96.5	70.9	54.1	70.3	50.0	20.3	90.3	14.9	718	493	41.0	2.2	26.7	8.2	0.0	712	14.6	79	350
4	Victoria River	NT	Very Remote	36.7	0.0	53.8	47.5	56.7	72.7	60.7	11.1	92.3	35.8	719	558	7.8	2.4	18.0	7.0	0.0	1,103	15.7	55	286
5	Elsey	NT	Very Remote	36.4	57.1	86.4	38.9	47.2	63.6	50.0	11.1	86.3	56.1	725	436	9.6	2.1	15.3	6.5	0.7	1,610	22.7	47	248
6	Daly	NT	Remote	35.2	60.0	63.0	54.3	37.8	61.5	53.8	30.7	88.0	31.6	760	536	9.3	2.3	19.7	4.9	1.1	1,138	24.8	84	216
7	Sandover - Plenty	NT	Very Remote	37.0	23.5	57.7	49.2	48.2	64.7	54.9	16.9	91.9	40.1	667	402	8.6	2.2	19.5	3.7	0.0	1,789	16.1	63	356
8	Tiwi Islands	NT	Very Remote	21.6	0.0	88.5	44.8	21.9	78.3	60.9	30.7	93.8	31.6	728	359	13.9	2.2	16.6	9.9	0.0	616	17.7	57	208
9	Elizabeth	SA	Major City	57.2	33.3	89.5	54.3	15.4	63.9	38.7	17.7	10.8	20.8	730	477	38.3	1.9	21.9	23.8	5.7	123	15.7	195	786
10	Tennant Creek	NT	Very Remote	38.6	19.2	86.1	33.3	30.0	57.1	46.4	21.8	66.0	9.8	891	1,007	8.3	2.1	17.7	9.7	1.5	1,001	14.8	109	288
	AVERAGE - bottom 10			**36.6**	**29.7**	**76.7**	**49.2**	**43.9**	**67.4**	**53.0**	**18.8**	**81.1**	**34.2**	**724**	**517**	**16.3**	**2.2**	**19.2**	**8.0**	**0.9**	**1,225**	**18.8**	**88**	**347**
	Average - AUSTRALIA			**14.7**	**16.7**	**70.9**	**42.1**	**6.7**	**21.9**	**11.4**	**21.9**	**6.9**	**7.7**	**997**	**908**	**5.5**	**1.8**	**10.2**	**10.3**	**7.0**	**60**	**19.8**	**250**	**776**
	Ratio - MOST vs LEAST disadvantage			**10.4**	**6.0**	**2.3**	**2.1**	**23.7**	**8.1**	**16.4**	**1.3**	**78.9**	**4.7**	**0.6**	**0.4**	**7.0**	**1.2**	**3.0**	**0.9**	**0.1**	**67**	**0.9**	**0.3**	**0.4**
	Ratio - Australian Average vs LEAST disadvantage			**2.5**	**1.8**	**1.1**	**1.2**	**6.6**	**3.1**	**4.6**	**0.9**	**11.8**	**4.4**	**0.7**	**0.6**	**3.0**	**1.2**	**1.9**	**0.8**	**0.1**	**20.3**	**1.0**	**0.4**	**0.4**

Note: See technical notes for further details about the Index, variable constructs and data sources.
Source: Bankwest Curtin Economics Centre | Authors' calculations from BCEC Early Learning Disadvantage Index

FIGURE 33

BCEC Early Learning Disadvantage Index, Australia and capital cities



Note: Statistical Area level 2 (SA2) has been used to assess early learning disadvantage throughout Australian regions. Data are broken using natural breaks, which classifies by maximising differences between each class.
Source: Bankwest Curtin Economics Centre | Authors' calculations from BCEC Early Learning Disadvantage Index.

HOW DO STATES AND TERRITORIES COMPARE?

Differences in the early learning outcomes of children across states and territories can arise because of the different profiles and socio-economic circumstances of young children and their families.

Service delivery and access to early learning are also key drivers of a child's learning outcomes, which means that any differences in access to early learning across each state and territory will also play an important role.

This report pays special attention to variations not just across state and territory, but also drills down further into each jurisdiction to uncover *within-state variation* and to capture patterns of early learning disadvantage across a state's geography.

The BCEC Early Learning Disadvantage Index provides a means to explore this within-state and territory variation, with Figure 34 presenting comparative summary measures of the distribution of the index both across and within jurisdictions.

Western Australia and the ACT have the tightest index distributions, with WA localities generally scoring higher on the index than the ACT, denoting greater disadvantage for children in early learning. This isn't surprising, with nearly nine in 10 of ACT localities sitting in the top three most advantaged deciles of economic advantage using the ABS' SEIFA classification. In WA, around 30 per cent of small areas are in the top three categories of economic advantage, although WA also has proportionately fewer areas in the bottom three SEIFA classes than all other jurisdictions except for the ACT.

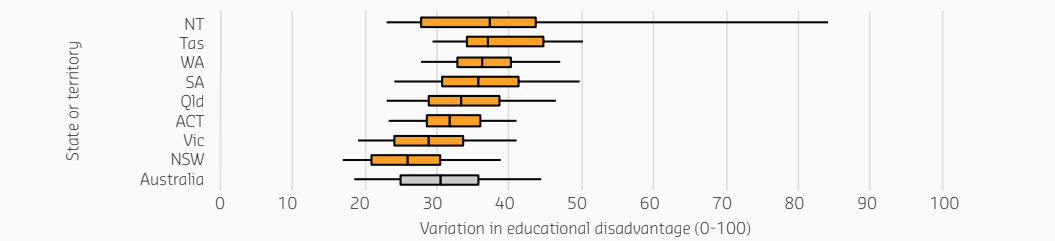
The greatest inequality in early learning outcomes, indicated by a wider spread in the distribution of the index, occurs in SA, Tas and the NT. For NT in particular, there is a substantial share of children that face high levels of early learning disadvantage. This evidences the polarisation in early learning outcomes between regional NT and Darwin, and even within the Greater Darwin area.

NSW has the greatest concentration of early learning advantage and the lowest median across all states and territories. The most disadvantaged 25% of areas in NSW match the most advantaged 25% of areas in WA. The typical level of early learning disadvantage in WA is similar to SA, but South Australian children face substantially greater inequality across localities.

FIGURE 34

Within-state variation in Early Learning Disadvantage Index

State or Territory	Lower ←		Typical	→	Higher
Percentiles	10th	25th	50th	75th	90th
New South Wales	16.4	20.5	25.4	30.2	38.6
Victoria	18.7	23.7	28.4	33.4	41.0
Australian Capital Territory	22.7	28.2	31.5	35.7	40.9
Queensland	22.6	28.4	33.0	38.5	46.4
South Australia	23.7	30.3	35.5	41.3	49.8
Western Australia	27.5	32.5	36.1	40.1	47.0
Tasmania	29.1	33.8	36.8	44.7	50.2
Northern Territory	22.6	27.3	37.2	43.5	84.8
Australia	**17.9**	**24.5**	**30.2**	**35.5**	**44.4**



Notes: The Statistical Area level 2 (SA2) classification has been used as the spatial unit to assess early learning disadvantage across Australian regions. Estimates are weighted by the number of children in each SA2.
Source: Bankwest Curtin Economics Centre | Authors' calculations from BCEC Early Learning Disadvantage Index.

WESTERN AUSTRALIA

Western Australia is an enormous sparse land mass that consists of a large number of remote and very remote areas with very low population density. More than 80 per cent of WA's population is located in Perth.

Remote areas across the state are typically areas that also have the highest level of early learning disadvantage, with children living in these areas having lower access to preschool, poorer development outcomes in their first year of schooling and lower economic resources to draw from.

Many of the remote areas across WA are also Indigenous communities, which often face multiple socio-economic issues and barriers.

The most advantaged areas are clustered around the Swan River and nearby Indian Ocean coastline, starting from North Fremantle and extending north to Mulaloo.

The fringes of the city reveal relatively higher levels of early learning disadvantage, from Mandurah and Dawesville in the south, Butler-Merriwa-Ridgewoood in the North, along with Serpentine-Jarrahdale in the south-east.

A cluster of suburbs where there is greater early learning disadvantage exists along the Albany highway starting from Orange Grove through to Armadale.

Two Rocks at the northern edge of Perth stands out as an anomaly - with very low levels of early learning disadvantage yet higher socio-economic disadvantage and high unemployment. This community is characterised by very high levels of children in the year before full time school attending preschool for 15+ hours, and very low levels of developmentally vulnerable children in their first year of school.

The juxtaposition between early learning and socio-economic disadvantage is especially of interest, particularly if driven by unique community initiatives or interventions. This can provide guidance for policy makers and resource targeting.

Comparing the top and bottom areas across WA (Table 13), there is a clear division between children living in remote and urban areas. The most disadvantaged areas are located in remote and regional areas throughout the state, with Halls Creek ranked first in the bottom ten, followed by Derby-West Kimberley, Withers-Usher and Kununurra. Whereas the most advantaged communities are generally located in Perth, with Cottesloe ranked first, followed by Two Rocks, Swanbourne and Claremont.

Children living in the most disadvantaged areas in Western Australia are less likely to be accessing the benchmark of 15 hours of preschool each week in their year before school, than the national average.

Around one-third of enrolled children are not attending preschool for 15 or more hours each week, compared to only 12.3 per cent of children in the most advantaged areas.

Children in the most disadvantaged areas in WA also have high rates of developmental vulnerabilities, with 1 in 3 children assessed as developmentally vulnerable on one or more domain and 1 in 5 developmentally vulnerable on two or more domains. A lack of access to services in many of the disadvantaged areas across Western Australia is evident, with a very high proportion of children living in households that do not have access to the internet – 23.0 per cent on average. This reaches over 50 per cent in Halls Creek and 40 per cent in Derby –West Kimberley.

Unemployment rates are more than five times higher than the national rate, averaging 16.8 per cent in these regions.

Many of the most disadvantaged communities are also characterised by a higher proportion of Indigenous children aged 0-5 years, with the share of Indigenous children averaging 40 per cent. This compares to 0.7 per cent in the most advantaged areas.

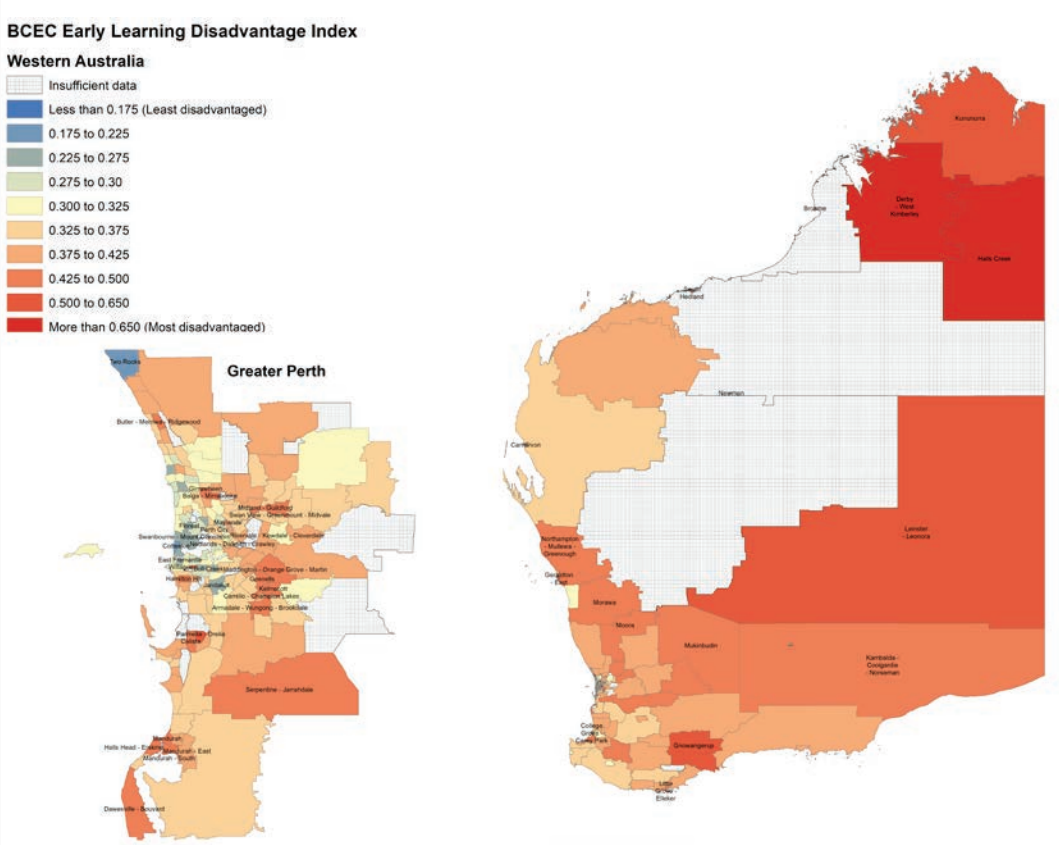
Two Rocks at the northern edge of Perth stands out as an anomaly - with very low levels of early learning disadvantage yet higher socio-economic disadvantage and high unemployment.

The most disadvantaged areas are located in remote and regional areas throughout the state, with Halls Creek ranked first in the bottom ten, followed by Derby-West Kimberley, Withers-Usher and Kununurra.

Two-thirds of children in the most disadvantaged areas in WA are attending preschool for 15+ hours compared to 85 per cent nationally.

FIGURE 35

Early learning disadvantage in Western Australia



Note: The Statistical Area level 2 (SA2) classification has been used as the spatial unit to assess early learning disadvantage across Australian regions. Data are broken using natural breaks, which classifies the data by maximising the differences between each class.
Source: Bankwest Curtin Economics Centre | Authors' calculations from BCEC Early Learning Disadvantage Index.

Children living in the most disadvantaged areas in Western Australia are less likely to be accessing the benchmark of 15 hours of preschool each week in their year before school, than the national average.

Around one-third of enrolled children are not attending preschool for 15 or more hours each week, compared to only 12.3 per cent of children in the most advantaged areas.

Children in the most disadvantaged areas in WA also have high rates of developmental vulnerabilities, with 1 in 3 children assessed as developmentally vulnerable on one or more domain and 1 in 5 developmentally vulnerable on two or more domains. A lack of access to services in many of the disadvantaged areas across Western Australia is evident, with a very high proportion of children living in households that do not have access to the internet – 23.0 per cent on average. This reaches over 50 per cent in Halls Creek and 40 per cent in Derby –West Kimberley.

Unemployment rates are more than five times higher than the national rate, averaging 16.8 per cent in these regions.

Many of the most disadvantaged communities are also characterised by a higher proportion of Indigenous children aged 0-5 years, with the share of Indigenous children averaging 40 per cent. This compares to 0.7 per cent in the most advantaged areas.

TABLE 13

Most and least disadvantaged in early learning: Western Australia

AUSTRALIA				Pre-school attendance				Internet	Child development		School resources	Demographic			Economic resources		Family			Housing			Caring	Population	
	Local area (SA2)	State/Territory	Remoteness	Share in YBFS enrolled in pre-school, not accessing 15+ hours	Share not in YBFS enrolled in pre-school, not accessing 15+ hours	Share of 3 year olds not attending pre-school	Share of 4 year olds not attending pre-school	Share of families with no internet access	Share of children vulnerable on AEDC domains		Pre-school student-teacher ratio (SA3)	Share of ATSI 0-5 year olds	English non-competency among 0-5 year olds	SEIFA score	Average equivalised household income	unemploy-ment rate	Average number of children in family	Share of one-parent families	Share of households under rental stress	Share of households under mortgage stress	Homeless-ness rate	Share of people who care for own children	Population of children in pre-school	Population of 0-5 year olds
	Most Advantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	Cottesloe	WA	Major City	4.8	6.8	64.6	49.3	0.7	10.4	1.5	9.4	0.0	3.2	1,166	1,739	1.4	1.9	7.0	9.7	5.9	9.8	19.9	107	404
2	Two Rocks	WA	Inner Regional	4.9	11.5	78.0	42.5	4.4	5.4	0.0	26.5	4.3	0.0	970	787	9.7	1.9	9.6	9.9	15.5	24.1	21.9	87	231
3	Swanbourne - Mount Claremont	WA	Major City	11.5	26.8	62.4	45.5	1.3	7.0	0.9	9.4	0.6	3.0	1,153	1,496	1.8	2.0	6.7	5.5	6.8	5.9	22.0	160	497
4	Claremont (WA)	WA	Major City	8.4	20.3	71.7	35.6	1.1	12.6	5.7	9.4	0.0	10.5	1,119	1,349	2.9	1.8	9.5	12.1	5.1	11.2	15.4	154	351
5	Jandakot	WA	Major City	0.0	37.5	70.6	36.4	1.9	10.0	10.0	19.8	0.0	7.9	1,101	1,217	3.0	1.9	6.2	4.2	9.7	0.0	16.9	25	121
6	Mosman Park - Peppermint Grove	WA	Major City	24.0	15.0	71.3	54.8	1.7	7.3	1.8	9.4	1.9	7.2	1,122	1,320	3.3	1.9	8.2	13.3	6.2	10.8	18.8	164	530
7	Floreat	WA	Major City	32.4	25.4	54.4	47.0	1.1	8.1	4.0	9.4	0.0	4.6	1,177	1,644	1.3	2.0	6.2	3.5	7.8	0.0	28.1	176	561
8	Bull Creek	WA	Major City	0.0	10.7	67.4	43.5	1.9	21.5	10.3	16.3	0.0	13.4	1,086	969	2.9	1.8	7.0	5.8	5.2	19.7	18.7	134	428
9	Winthrop	WA	Major City	10.9	39.0	68.1	34.5	0.9	17.9	3.0	16.3	0.0	12.9	1,121	1,134	1.9	1.9	6.0	2.1	5.2	0.0	19.2	87	278
10	Nedlands - Dalkeith - Crawley	WA	Major City	25.7	27.9	59.2	44.3	1.3	11.4	3.8	9.4	0.5	11.9	1,150	1,465	2.0	1.9	6.3	15.2	5.5	14.0	18.4	302	938
	AVERAGE			**12.3**	**22.1**	**66.8**	**43.3**	**1.7**	**11.2**	**4.1**	**13.5**	**0.7**	**7.5**	**1,117**	**1,312**	**3.0**	**1.9**	**7.3**	**8.1**	**7.3**	**9.6**	**19.9**	**140**	**434**
	Most Disadvantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	Halls Creek	WA	Very Remote	24.6	16.7	96.5	70.9	54.1	70.3	50.0	20.3	90.3	14.9	718	493	41.0	2.2	26.7	8.2	0.0	711.5	14.6	79	350
2	Derby - West Kimberley	WA	Very Remote	34.5	23.3	84.0	68.1	39.9	45.5	26.5	20.3	79.7	13.1	796	688	32.5	2.1	19.5	7.1	1.9	444.7	18.9	149	797
3	Withers - Usher	WA	Inner Regional	25.5	24.3	92.5	57.7	12.7	47.7	40.9	18.8	13.0	2.8	853	638	14.6	1.8	19.5	17.4	8.0	33.7	19.4	92	385
4	Kununurra	WA	Very Remote	32.6	0.0	86.2	64.2	30.6	39.8	24.4	20.3	48.2	3.2	941	1,107	12.2	2.0	15.8	10.5	3.9	233.1	18.0	184	662
5	Geraldton - East	WA	Outer Regional	38.7	64.1	100.0	57.0	13.1	29.1	17.9	12.9	27.4	2.4	918	782	11.9	2.0	15.3	9.0	9.4	27.4	19.4	158	576
6	Leinster - Leonora	WA	Very Remote	31.6	52.6	79.7	65.3	45.2	0.0	0.0	19.6	73.9	27.8	790	763	17.0	2.0	16.5	5.7	0.4	321.1	16.3	57	341
7	South Hedland	WA	Remote	70.8	14.0	94.8	57.5	11.1	26.0	16.6	34.7	25.8	4.2	993	1,567	7.3	1.9	10.0	10.0	2.4	115.6	23.7	259	997
8	Gnowangerup	WA	Remote	9.1	100.0	100.0	66.7	8.6	22.4	12.2	20.2	10.7	0.0	1,011	886	2.1	1.9	7.1	4.0	2.9	24.7	21.9	38	234
9	Newman	WA	Very Remote	37.4	32.8	92.3	51.3	5.8	41.3	23.1	34.7	22.3	4.7	1,014	1,688	8.6	2.0	5.3	3.4	0.5	27.8	27.4	149	503
10	Parmelia - Orelia	WA	Major City	34.8	23.8	88.8	49.6	8.9	38.5	25.7	31.2	8.1	4.5	893	727	20.6	1.8	14.8	13.9	10.2	35.6	19.6	218	868
	AVERAGE			**33.9**	**35.2**	**91.5**	**60.8**	**23.0**	**36.1**	**23.7**	**23.3**	**39.9**	**7.7**	**893**	**934**	**16.8**	**2.0**	**15.0**	**8.9**	**4.0**	**197.5**	**19.9**	**138**	**571**
	Average - AUSTRALIA			**14.7**	**16.7**	**70.9**	**42.1**	**6.7**	**21.9**	**11.4**	**21.9**	**6.9**	**7.7**	**997**	**908**	**5.5**	**1.8**	**10.2**	**10.3**	**7.0**	**60**	**19.8**	**250**	**776**
	Ratio - MOST vs LEAST disadvantage			**2.8**	**1.6**	**1.4**	**1.4**	**13.9**	**3.2**	**5.8**	**1.7**	**54.3**	**1.0**	**0.8**	**0.7**	**5.6**	**1.0**	**2.1**	**1.1**	**0.5**	**20.7**	**1.0**	**1.0**	**1.3**
	Ratio - Australian Average vs LEAST disadvantage			**2.3**	**2.1**	**1.3**	**1.4**	**3.5**	**1.7**	**2.1**	**1.1**	**5.8**	**1.0**	**0.9**	**1.0**	**3.0**	**1.1**	**1.5**	**0.9**	**0.6**	**3.3**	**1.0**	**0.6**	**0.7**

Note: See technical notes for further details about the Index, variable constructs and data sources.
Source: Bankwest Curtin Economics Centre | Authors' calculations from BCEC Early Learning Disadvantage Index

NEW SOUTH WALES

The spread of early learning disadvantage across NSW shows increasing disadvantage the further away children live from the coast line and the greater the level of remoteness (Figure 36).

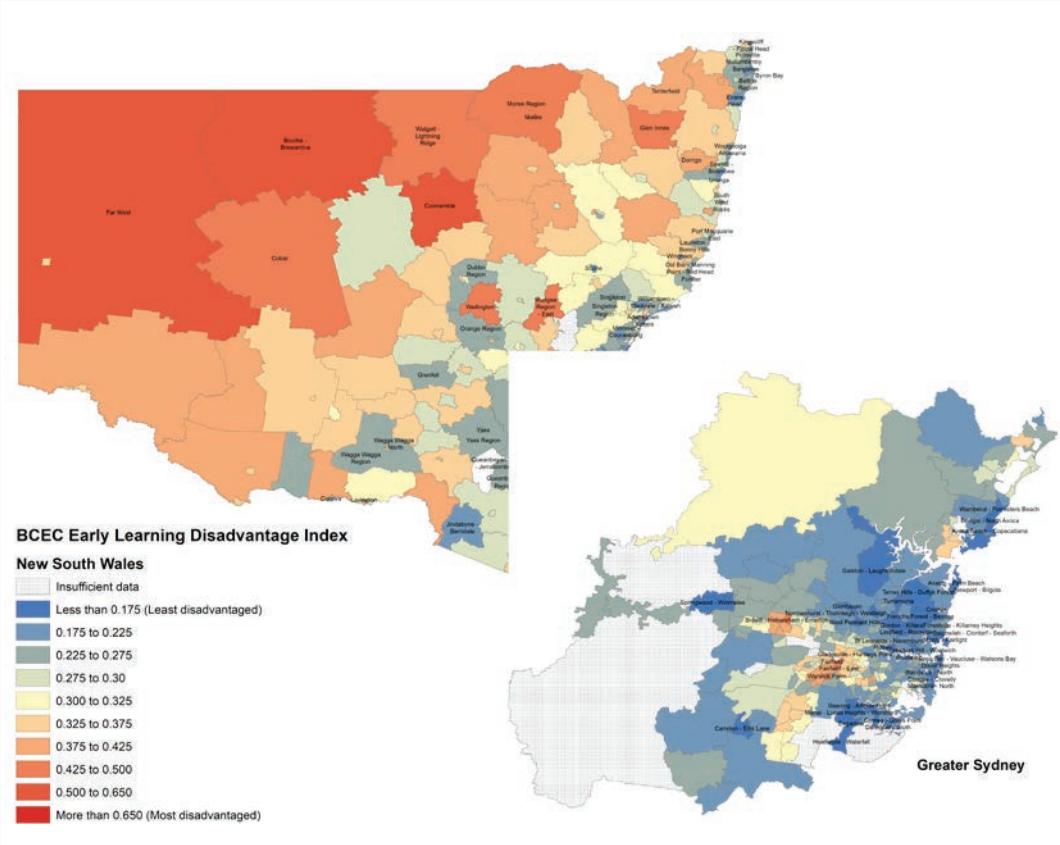
Some pockets of disadvantage are still evident along the coast line and in clusters in south-west and western Sydney. In particular, areas between Penrith and Blacktown in the west have higher levels of early learning disadvantage, as do communities around Fairfield in Sydney's south-west.

The ten most and least early learning disadvantaged areas within NSW demonstrate the divide between children that have considerable advantage and those that do not (Table 14).

The most disadvantaged areas are located in remote and regional areas throughout the state, with the Far West having the highest level of early learning disadvantage, followed by Coonamble and Bourke-Brewarrina.

FIGURE 36

Early learning disadvantage in New South Wales



Note: The Statistical Area level 2 (SA2) classification has been used as the spatial unit to assess early learning disadvantage across Australian regions. Data are broken using natural breaks, which classifies the data by maximising the differences between each class.
Source: Bankwest Curtin Economics Centre | Authors' calculations from numerous data sources.

TABLE 14

Most and least disadvantaged in early learning: New South Wales

AUSTRALIA				Pre-school attendance				Internet	Child development		School resources	Demographic			Economic resources			Family			Housing		Caring	Population	
	Local area (SA2)	State/Territory	Remoteness	Share in YBFS enrolled in pre-school, not accessing 15+ hours	Share not in YBFS enrolled in pre-school, not accessing 15+ hours	Share of 3 year olds not attending pre-school	Share of 4 year olds not attending pre-school	Share of families with no internet access	Share of children vulnerable on AEDC domains		Pre-school student-teacher ratio (SA3)	Share of ATSI 0-5 year olds	English non-competency among 0-5 year olds	SEIFA score	Average equivalised household income	unemploy-ment rate	Average number of children in family	Share of one-parent families	Share of households under rental stress	Share of households under mortgage stress	Homeless-ness rate	Share of people who care for own children	Population of children in pre-school	Population of 0-5 year olds
	Most Advantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	Terrey Hills - Duffys Forest	NSW	Major City	8.8	9.7	0.0	20.0	1.9	9.3	7.0	15.2	2.2	1.4	1,128	1,258	3.2	2.0	5.7	6.6	9.1	8.1	22.2	99	225
2	Wamberal - Forresters Beach	NSW	Major City	3.1	10.3	34.9	13.5	3.1	4.9	2.4	20.8	3.3	1.5	1,077	1,020	1.5	1.9	8.1	7.0	8.5	18.0	23.7	303	736
3	Manly - Fairlight	NSW	Major City	5.2	4.0	37.2	27.7	1.8	6.1	1.3	13.0	0.2	7.2	1,151	1,731	3.0	1.7	5.9	15.2	4.4	48.5	17.6	426	1,412
4	West Pennant Hills	NSW	Major City	1.8	4.8	36.1	23.0	0.9	9.2	3.9	14.3	0.4	17.4	1,165	1,416	1.7	1.9	4.3	3.4	9.5	9.6	20.8	250	775
5	Dover Heights	NSW	Major City	0.0	0.0	32.5	22.4	1.6	12.1	5.0	9.0	0.7	6.3	1,152	1,483	2.0	1.8	7.2	16.4	8.1	9.4	23.8	271	882
6	Forestville - Killarney Heights	NSW	Major City	0.0	9.7	31.1	19.3	1.7	11.2	4.8	15.2	0.7	6.7	1,130	1,204	3.1	1.9	6.6	6.9	7.7	9.5	26.4	310	881
7	Castle Hill - East	NSW	Major City	0.0	0.0	41.7	44.7	1.4	3.4	0.0	14.3	0.0	12.7	1,091	1,003	1.0	1.9	4.4	5.5	6.4	0.0	17.0	63	228
8	Menai - Lucas Heights - Woronora	NSW	Major City	5.3	7.8	37.6	19.8	1.9	9.5	2.0	17.4	1.9	3.5	1,102	1,217	2.0	1.9	7.6	4.5	9.0	9.6	22.1	528	1,446
9	Randwick - North	NSW	Major City	3.9	3.2	44.4	21.9	2.6	7.2	2.2	16.4	1.0	7.2	1,135	1,488	2.2	1.6	8.2	17.3	5.2	62.9	19.5	391	1,247
10	Hunters Hill - Woolwich	NSW	Major City	7.2	0.0	36.3	21.7	1.6	10.4	3.7	12.1	0.0	8.7	1,151	1,625	3.4	2.0	6.9	7.9	8.2	6.9	21.1	193	601
	AVERAGE			**3.5**	**4.9**	**33.2**	**23.4**	**1.8**	**8.3**	**3.2**	**14.8**	**1.0**	**7.2**	**1,128**	**1,345**	**2.3**	**1.9**	**6.5**	**9.1**	**7.6**	**18.3**	**21.4**	**283**	**843**
	Most Disadvantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	Far West	NSW	Very Remote	33.3	50.0	69.8	42.4	33.0	40.0	14.3	23.9	43.8	0.0	903	611	3.5	1.9	12.6	3.3	2.0	139.0	14.1	69	192
2	Coonamble	NSW	Remote	33.7	57.9	58.2	35.1	26.7	38.3	21.7	18.6	55.9	0.0	893	646	4.0	2.0	16.4	6.7	2.9	9.7	15.6	133	299
3	Bourke - Brewarrina	NSW	Very Remote	25.7	49.1	59.7	47.7	30.6	28.6	16.7	18.6	56.4	1.2	894	735	4.4	2.0	19.3	6.3	2.2	78.9	15.0	127	337
4	Moree	NSW	Outer Regional	25.8	35.8	58.3	33.5	21.3	41.7	26.2	21.1	38.8	1.7	901	779	7.1	1.9	17.0	12.6	3.6	72.4	17.5	257	727
5	Walgett - Lightning Ridge	NSW	Very Remote	14.0	38.8	42.4	33.3	31.1	35.8	22.2	18.6	50.1	0.6	855	523	5.9	2.0	18.3	8.7	1.6	184.2	14.0	156	469
6	Glen Innes	NSW	Outer Regional	32.1	53.2	80.2	38.5	13.3	30.9	18.5	20.6	15.1	2.3	909	569	7.1	1.9	11.6	10.5	5.1	34.4	14.8	153	502
7	Moree Region	NSW	Outer Regional	47.7	57.4	48.6	44.0	16.1	26.7	16.0	21.1	25.4	1.9	955	824	4.2	2.1	10.9	3.6	3.0	124.0	19.9	168	457
8	Wellington	NSW	Outer Regional	29.3	23.3	64.0	33.6	18.2	40.6	20.8	18.7	41.7	2.2	902	595	3.6	1.9	14.6	8.2	4.0	23.0	14.5	207	566
9	Mudgee Region - East	NSW	Outer Regional	43.9	44.8	41.2	47.2	14.7	35.3	14.7	21.3	12.2	0.0	874	529	5.3	1.8	10.8	10.3	3.6	8.9	15.1	70	189
10	Bidwill - Hebersham - Emerton	NSW	Major City	25.7	22.5	70.2	50.9	15.9	32.4	17.4	24.5	17.2	9.3	812	597	18.3	2.1	23.9	19.9	6.7	84.0	18.3	383	1,753
	AVERAGE			**31.1**	**43.3**	**59.3**	**40.6**	**22.1**	**35.0**	**18.8**	**20.7**	**35.6**	**1.9**	**890**	**641**	**6.3**	**2.0**	**15.6**	**9.0**	**3.5**	**75.9**	**15.9**	**172**	**549**
	Average - AUSTRALIA			**14.7**	**16.7**	**70.9**	**42.1**	**6.7**	**21.9**	**11.4**	**21.9**	**6.9**	**7.7**	**997**	**908**	**5.5**	**1.8**	**10.2**	**10.3**	**7.0**	**60**	**19.8**	**250**	**776**
	Ratio - MOST vs LEAST disadvantage			**8.8**	**8.8**	**1.8**	**1.7**	**11.9**	**4.2**	**5.8**	**1.4**	**34.7**	**0.3**	**0.8**	**0.5**	**2.7**	**1.1**	**2.4**	**1.0**	**0.5**	**4.2**	**0.7**	**0.6**	**0.7**
	Ratio - Australian Average vs LEAST disadvantage			**2.1**	**2.6**	**0.8**	**1.0**	**3.3**	**1.6**	**1.7**	**0.9**	**5.2**	**0.3**	**0.9**	**0.7**	**1.2**	**1.1**	**1.5**	**0.9**	**0.5**	**1.3**	**0.8**	**0.7**	**0.7**

Note: See technical notes for further details about the Index, variable constructs and data sources.
Source: Bankwest Curtin Economics Centre | Authors' calculations from BCEC Early Learning Disadvantage Index

Far West NSW has the highest levels of early learning disadvantage in NSW.

Over 40 per cent of four year old children in the most disadvantaged areas in NSW do not attend preschool, compared to an average of 23 per cent for the most advantaged areas.

Bidwill-Hebersham-Emerton is the only SA2 region in the bottom ten that sits in a Major City area. This area is characterised by a high proportion of children under five with low English proficiency, a higher share of single parent households and a high proportion of families living in rental stress.

The ten most advantaged areas where children under five have the best early learning outcomes are all located within Sydney, with Terry Hills-Duffys Forest the most advantaged SA2 region in NSW.

Many of the most disadvantaged communities are also characterised by a higher proportion of Indigenous children aged 0-5 years, with the share of Indigenous children averaging 36 per cent for the ten most disadvantaged areas. This compares to 1 per cent in the most advantaged areas.

Over 40 per cent of four year old children in the most disadvantaged areas in NSW do not attend preschool, compared to an average of 23 per cent for the most advantaged areas.

Of those attending preschool 30 per cent of children in the most disadvantaged areas are not accessing the benchmark of 15 hours of preschool each week in their year before school, compared to only 3.5 per cent of children in the most advantaged areas in NSW.

Children in the most disadvantaged areas also have high rates of developmental vulnerabilities, with 35 per cent of children assessed as developmentally vulnerable on one or more domain and 18 per cent developmentally vulnerable on two or more domains.

NSW also sees a lack of access to services in many of the disadvantaged areas, with 22 per cent of children living in households that do not have access to the internet. This is as high as 33 per cent for the Far West SA2 region.

Unemployment rates too are higher in the most disadvantaged areas, sitting at an average of 6.3 per cent, compared to an average of 2.3 per cent for the most advantaged areas of NSW.

VICTORIA

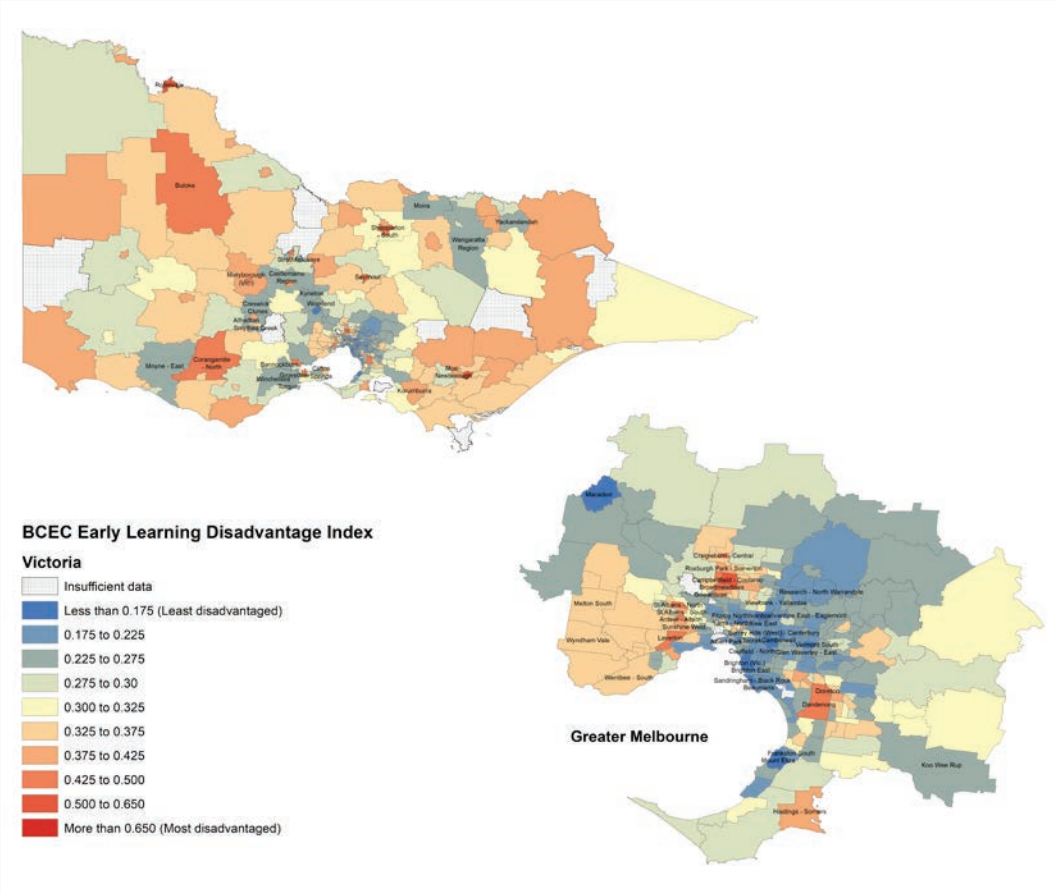
A patchwork of relative early learning disadvantage exists across Victoria, with pockets of advantage and disadvantage spread across the state (Figure 37). Robinvale, Buloke, Corangamite-North, Shepparton, Seymour and Moe-Newborough all record relatively high levels of early learning disadvantage.

Clusters of disadvantage are evident on the fringes of Melbourne, with pockets of disadvantage around Laverton in the west, Campbellfield – Coolaroo in the north and Dandenong in the south east. Areas with greater advantage are located in the north-east corridor from Sandringham and Brighton through to Templestowe and Eltham. Macedon on the most outskirts of Greater Melbourne also stands out as having greater advantage.

Clusters of early learning disadvantage exist on the fringes of Melbourne.

FIGURE 37

Early learning disadvantage in Victoria



Note: The Statistical Area level 2 (SA2) classification has been used as the spatial unit to assess early learning disadvantage across Australian regions. Data are broken using natural breaks, which classifies the data by maximising the differences between each class.
Source: Bankwest Curtin Economics Centre | Authors' calculations from numerous data sources.

: The majority of both advantaged and disadvantaged areas in Victoria are within a major urban area.

Among the ten most disadvantaged areas in Victoria, the proportion of children that are developmentally vulnerable on two or more domains is almost 2.5 times that of the national average.

The most and least disadvantaged areas within Victoria have a different profile to those in other states and territories, with the divide less clearly associated with remoteness.

While nine out of ten of the most advantaged areas are within a Major City, (the exception being Macedon), six out of ten of the most disadvantaged areas are also classified as a Major City.

Morwell is the most disadvantaged area, followed by Campbellfield-Coolaroo and Robinvale. Campbellfield-Coolaroo has over 1,300 0-5 year olds, with 18.8 per cent of enrolled students not attending preschool for 15 or more hours each week. Whereas the average for the most advantaged areas is 5.9 per cent.

Relative to the national average, the bottom ten areas within Victoria score reasonably well on a number of indicators overall, however, there is also a degree of variation within these areas, making them challenging to typify.

For the ten most disadvantaged areas, the proportion of children that are developmentally vulnerable on one or more domains is around 4 in 10 children, and just under 1 in 3 are vulnerable on two or more domains. This is compares with the national average of 21.9 and 11.4 per cent respectively.

The social and demographic profile of these areas is where we can see some likely drivers of the level of early learning disadvantage experienced by children in these areas. Children in these areas are more likely to come from non-English speaking backgrounds. Nationally, the proportion of English non-competency among 0-5 year olds is 7.7 per cent. Across the bottom ten areas in VIC, the average proportion is 17.0 per cent, with a number of areas recording well above these proportions.

Average equivalised household income for the most disadvantaged regions in VIC is half of that available in the most advantaged regions, and 30 percent lower than the Australian average.

TABLE 15

Most and least disadvantaged in early learning: Victoria

AUSTRALIA				Pre-school attendance				Internet	Child development		School resources	Demographic			Economic resources		Family		Housing			Caring	Population	
	Local area (SA2)	State/Territory	Remoteness	Share in YBFS enrolled in pre-school, not accessing 15+ hours	Share not in YBFS enrolled in pre-school, not accessing 15+ hours	Share of 3 year olds not attending pre-school	Share of 4 year olds not attending pre-school	Share of families with no internet access	Share of children vulnerable on AEDC domains		Pre-school student-teacher ratio (SA3)	Share of ATSI 0-5 year olds	English non-competency among 0-5 year olds	SEIFA score	Average equivalised household income	unemploy-ment rate	Average number of children in family	Share of one-parent families	Share of households under rental stress	Share of households under mortgage stress	Homeless-ness rate	Share of people who care for own children	Population of children in pre-school	Population of 0-5 year olds
	Most Advantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	South Yarra - West	VIC	Major City	0.0	0.0	38.2	43.6	0.9	7.4	0.0	8.1	0.0	11.7	1,141	1,571	2.1	1.6	6.1	15.2	3.8	43.2	9.0	80	201
2	Elsternwick	VIC	Major City	7.7	8.9	41.3	21.2	2.8	7.6	2.2	13.0	0.6	8.5	1,112	1,274	2.9	1.9	6.6	11.0	4.7	53.0	20.9	267	784
3	Ivanhoe East - Eaglemont	VIC	Major City	5.0	5.8	51.9	27.4	1.3	7.1	1.2	21.0	0.0	6.9	1,144	1,455	1.1	1.9	5.8	5.9	6.0	4.0	21.3	132	409
4	Sandringham - Black Rock	VIC	Major City	8.9	7.6	53.3	23.1	1.4	5.0	1.9	12.2	0.0	4.9	1,129	1,332	2.9	1.8	6.7	8.1	5.8	7.5	21.1	297	927
5	Vermont South	VIC	Major City	7.8	9.0	53.1	25.2	2.3	4.3	1.4	23.7	0.7	23.8	1,075	907	1.7	1.8	6.5	3.3	7.5	18.3	18.4	183	562
6	Fitzroy North	VIC	Major City	0.0	6.7	45.8	35.2	2.9	6.5	3.2	11.0	1.2	6.2	1,104	1,287	4.6	1.7	7.2	14.8	3.9	113.3	14.3	193	603
7	Brighton East	VIC	Major City	8.3	10.7	45.2	20.6	1.2	10.6	4.0	12.2	0.0	5.9	1,130	1,273	2.5	1.9	8.2	7.8	7.6	2.6	24.4	368	983
8	Macedon	VIC	Inner Regional	0.0	13.3	54.8	36.2	1.5	6.3	0.0	24.9	0.0	0.0	1,110	1,148	1.7	2.0	4.9	2.7	8.7	0.0	22.4	79	217
9	Camberwell	VIC	Major City	8.4	11.0	49.3	29.5	1.2	8.6	2.5	11.6	0.4	12.7	1,137	1,348	2.7	1.9	7.6	8.2	6.1	12.9	20.8	383	1,184
10	Surrey Hills (East) - Mont Albert	VIC	Major City	13.0	4.1	60.4	27.4	1.8	5.2	2.6	13.7	0.0	12.8	1,133	1,298	3.7	1.8	7.1	7.8	5.5	16.3	22.1	212	626
	AVERAGE			**5.9**	**7.7**	**49.3**	**28.9**	**1.7**	**6.9**	**1.9**	**15.1**	**0.3**	**9.3**	**1,122**	**1,289**	**2.6**	**1.8**	**6.7**	**8.5**	**6.0**	**27.1**	**19.5**	**219**	**650**
	Most Disadvantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	Morwell	VIC	Inner Regional	25.9	28.9	84.8	53.1	10.7	48.8	39.9	27.5	7.2	3.4	830	559	10.1	1.8	17.5	13.3	4.0	79.8	14.1	248	877
2	Campbellfield - Coolaroo	VIC	Major City	18.8	22.9	79.7	51.8	11.2	46.3	31.3	28.6	1.2	33.2	828	495	16.5	2.2	12.3	14.6	11.7	90.1	17.1	370	1,366
3	Robinvale	VIC	Outer Regional	26.9	100.0	73.2	28.0	18.6	25.9	15.1	16.2	18.3	13.0	886	672	3.3	2.1	11.8	9.7	3.9	180.1	15.7	29	252
4	St Albans - North	VIC	Major City	18.7	16.5	88.1	51.2	11.7	41.6	24.3	21.5	0.5	31.1	864	571	13.2	1.8	14.8	13.9	7.6	113.9	16.7	438	1,422
5	Mooroopna	VIC	Inner Regional	13.8	9.6	74.5	50.0	8.6	48.2	32.1	23.4	16.4	3.2	883	670	7.2	1.8	16.6	10.7	5.1	45.2	16.8	161	523
6	Ardeer - Albion	VIC	Major City	19.0	18.5	76.8	51.1	9.7	42.1	28.4	21.5	1.3	26.6	904	669	8.7	1.7	12.0	15.0	6.7	146.4	16.7	165	603
7	Broadmeadows	VIC	Major City	21.8	15.2	84.6	60.0	12.5	37.3	21.5	28.6	1.7	30.1	819	519	20.0	2.0	15.1	21.3	7.5	84.2	17.7	285	1,149
8	Corio - Norlane	VIC	Major City	17.2	22.5	78.2	50.3	13.4	39.3	23.9	23.1	5.1	9.6	819	555	13.0	1.9	20.9	16.8	5.5	61.6	17.1	544	1,795
9	Craigieburn - Central	VIC	Major City	19.6	21.2	84.3	46.6	6.4	44.9	26.4	28.6	2.0	16.8	925	732	8.9	1.9	12.2	8.6	12.5	84.4	22.5	204	751
10	California Gully - Eaglehawk	VIC	Inner Regional	11.5	10.9	82.6	51.1	10.7	42.3	27.3	27.7	7.7	2.5	881	629	7.6	1.9	17.7	13.9	5.9	36.8	18.6	284	930
	AVERAGE			**19.3**	**26.6**	**80.7**	**49.3**	**11.4**	**41.7**	**27.0**	**24.6**	**6.1**	**17.0**	**864**	**607**	**10.9**	**1.9**	**15.1**	**13.8**	**7.0**	**92.3**	**17.3**	**273**	**967**
	Average - AUSTRALIA			**14.7**	**16.7**	**70.9**	**42.1**	**6.7**	**21.9**	**11.4**	**21.9**	**6.9**	**7.7**	**997**	**908**	**5.5**	**1.8**	**10.2**	**10.3**	**7.0**	**60**	**19.8**	**250**	**776**
	Ratio - MOST vs LEAST disadvantage			**3.3**	**3.5**	**1.6**	**1.7**	**6.5**	**6.1**	**14.3**	**1.6**	**20.9**	**1.8**	**0.8**	**0.5**	**4.2**	**1.0**	**2.3**	**1.6**	**1.2**	**3.4**	**0.9**	**1.2**	**1.5**
	Ratio - Australian Average vs LEAST disadvantage			**1.3**	**1.6**	**1.1**	**1.2**	**1.7**	**1.9**	**2.4**	**1.1**	**0.9**	**2.2**	**0.9**	**0.7**	**2.0**	**1.0**	**1.5**	**1.3**	**1.0**	**1.5**	**0.9**	**1.1**	**1.2**

Note: See technical notes for further details about the Index, variable constructs and data sources.
Source: Bankwest Curtin Economics Centre | Authors' calculations from BCEC Early Learning Disadvantage Index

Many of Queensland's regions record high to very high levels of early learning disadvantage, with children doing poorly on multiple early learning indicators.

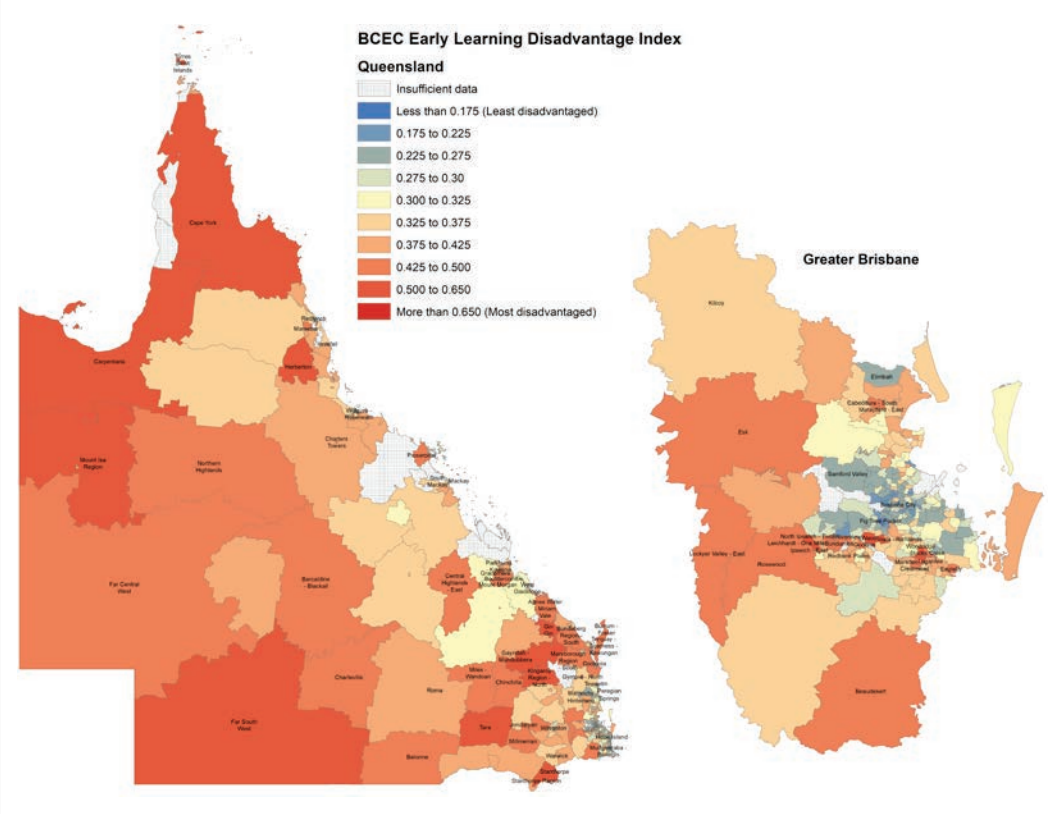
QUEENSLAND

For Queensland, many of the state's regions record high to very high levels of early learning disadvantage, with children doing poorly on multiple early learning indicators.

A cluster of advantaged areas is evident along the Brisbane river, extending from Fig Tree Pocket through to Eagle Farm. Early learning disadvantage increases as suburbs spread away from the city. Ipswich, Rosewood and the Lockyer valley in the West stand out as more disadvantaged areas, as well as the Logan-Beaudesert region south of the city.

FIGURE 38

Early learning disadvantage in Queensland



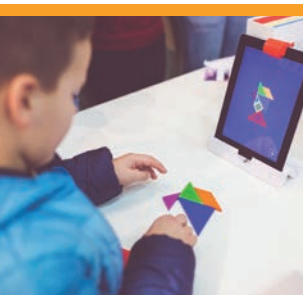
Note: The Statistical Area level 2 (SA2) classification has been used as the spatial unit to assess early learning disadvantage across Australian regions. Data are broken using natural breaks, which classifies the data by maximising the differences between each class.
Source: Bankwest Curtin Economics Centre | Authors' calculations from numerous data sources.

TABLE 16

Most and least disadvantaged in early learning: Queensland

AUSTRALIA				Pre-school attendance				Internet	Child development		School resources	Demographic			Economic resources		Family		Housing			Caring	Population	
	Local area (SA2)	State/Territory	Remoteness	Share in YBFS enrolled in pre-school, not accessing 15+ hours	Share not in YBFS enrolled in pre-school, not accessing 15+ hours	Share of 3 year olds not attending pre-school	Share of 4 year olds not attending pre-school	Share of families with no internet access	Share of children vulnerable on AEDC domains		Pre-school student-teacher ratio (SA3)	Share of ATSI 0-5 year olds	English non-competency among 0-5 year olds	SEIFA score	Average equivalised household income	unemploy-ment rate	Average number of children in family	Share of one-parent families	Share of households under rental stress	Share of households under mortgage stress	Homeless-ness rate	Share of people who care for own children	Population of children in pre-school	Population of 0-5 year olds
	Most Advantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	Fig Tree Pocket	QLD	Major City	0.0	0.0	63.9	25.5	1.0	10.6	0.0	20.3	0.0	3.9	1,170	1,578	3.5	2.0	7.1	4.1	5.8	0.0	28.1	94	256
2	Clear Island Waters	QLD	Major City	0.0	0.0	43.3	33.3	3.7	15.4	3.8	24.2	2.3	7.9	1,073	867	3.0	1.8	7.8	10.2	8.7	7.3	16.0	58	175
3	Spring Hill	QLD	Major City	0.0	0.0	54.8	39.3	3.9	11.7	0.0	10.3	0.0	27.2	1,028	1,086	6.7	1.5	7.4	28.4	3.3	738.6	7.6	50	157
4	Hendra	QLD	Major City	0.0	0.0	64.8	29.4	1.8	8.2	6.1	15.3	0.0	3.2	1,125	1,402	2.3	1.8	8.0	8.5	7.6	6.5	22.9	120	320
5	Ashgrove	QLD	Major City	3.8	0.0	66.9	24.2	1.3	11.5	4.7	19.0	0.7	3.2	1,135	1,348	2.3	2.0	8.0	9.9	5.3	31.5	24.9	328	963
6	Grange	QLD	Major City	4.2	5.8	63.2	26.5	0.9	10.8	4.1	15.3	0.0	1.9	1,136	1,423	1.8	1.9	7.3	6.2	4.9	7.2	31.2	141	361
7	Chapel Hill	QLD	Major City	0.0	0.0	61.9	39.8	0.6	8.7	4.7	20.3	0.7	7.3	1,140	1,312	3.6	1.9	6.8	4.8	5.8	24.9	23.1	244	704
8	Corinda	QLD	Major City	0.0	8.9	68.1	30.3	1.6	11.1	3.7	11.2	0.0	5.3	1,082	1,108	7.5	1.9	10.1	10.8	4.6	0.0	22.2	118	329
9	Taringa	QLD	Major City	0.0	0.0	76.4	38.6	2.2	8.0	2.3	11.2	0.0	21.3	1,100	1,099	6.2	1.7	5.9	22.6	2.9	30.5	12.8	148	395
10	Bardon	QLD	Major City	7.3	4.7	70.5	30.3	1.0	8.3	4.5	19.0	0.5	1.7	1,148	1,479	1.7	1.9	8.5	7.5	5.6	7.4	26.1	300	767
	AVERAGE			**1.5**	**1.9**	**63.4**	**31.7**	**1.8**	**10.4**	**3.4**	**16.6**	**0.4**	**8.3**	**1,114**	**1,270**	**3.9**	**1.8**	**7.7**	**11.3**	**5.5**	**85.4**	**21.5**	**160**	**443**
	Most Disadvantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	Carpentaria	QLD	Very Remote	12.2	0.0	86.4	55.8	39.7	48.7	31.6	17.9	85.4	2.1	777	612	26.2	2.3	22.1	10.1	0.9	603.1	17.9	98	508
2	Torres Strait Islands	QLD	Very Remote	0.0	0.0	88.1	57.5	25.2	62.0	40.2	33.5	97.7	50.8	759	454	32.7	2.2	29.8	11.2	0.0	430.1	25.8	91	658
3	Rockhampton City	QLD	Inner Regional	8.3	30.0	82.8	61.3	18.3	53.6	35.7	23.1	13.0	4.5	837	632	22.2	1.7	18.4	18.2	5.4	430.7	13.2	56	169
4	Bundaberg	QLD	Inner Regional	17.2	25.0	85.2	63.2	13.0	49.3	34.2	27.0	11.2	8.7	832	555	18.6	1.7	19.0	29.3	3.1	144.5	14.7	136	376
5	Mount Isa Region	QLD	Very Remote	38.2	37.8	89.7	77.3	18.6	29.3	19.0	17.9	36.5	1.5	939	1,075	5.5	2.0	11.4	7.8	2.4	71.1	17.5	92	252
6	Tara	QLD	Outer Regional	30.3	69.2	84.8	63.0	17.5	27.4	17.7	27.5	15.9	1.2	869	531	6.1	2.0	10.2	5.4	3.7	120.3	15.5	46	252
7	Stanthorpe Region	QLD	Outer Regional	34.0	29.0	91.5	55.2	10.6	43.4	27.6	16.8	7.8	1.5	938	604	3.2	1.9	7.4	5.7	7.1	39.9	17.7	78	345
8	Mackay	QLD	Inner Regional	25.0	0.0	85.3	65.9	10.0	48.5	36.4	33.7	12.8	11.0	884	719	21.5	1.7	11.6	21.3	3.2	318.4	15.0	51	195
9	Manoora	QLD	Outer Regional	9.6	10.9	91.1	66.0	27.3	35.2	25.3	23.8	42.5	13.7	818	630	13.1	1.8	29.9	28.4	3.6	101.8	17.2	137	478
10	Kingaroy Region - North	QLD	Inner Regional	4.6	11.3	80.3	68.5	21.2	44.4	28.6	25.2	44.1	1.3	851	537	14.5	2.1	14.0	8.0	4.6	175.7	15.7	180	707
	AVERAGE			**17.9**	**21.3**	**86.5**	**63.4**	**20.1**	**44.2**	**29.6**	**24.6**	**36.7**	**9.6**	**850**	**635**	**16.4**	**1.9**	**17.4**	**14.5**	**3.4**	**243.6**	**17.0**	**97**	**394**
	Average - AUSTRALIA			**14.7**	**16.7**	**70.9**	**42.1**	**6.7**	**21.9**	**11.4**	**21.9**	**6.9**	**7.7**	**997**	**908**	**5.5**	**1.8**	**10.2**	**10.3**	**7.0**	**60**	**19.8**	**250**	**776**
	Ratio - MOST vs LEAST disadvantage			**11.8**	**11.0**	**1.4**	**2.0**	**11.2**	**4.2**	**8.8**	**1.5**	**86.5**	**1.2**	**0.8**	**0.5**	**4.2**	**1.1**	**2.3**	**1.3**	**0.6**	**2.9**	**0.8**	**0.6**	**0.9**
	Ratio - Australian Average vs LEAST disadvantage			**1.2**	**1.3**	**1.2**	**1.5**	**3.0**	**2.0**	**2.6**	**1.1**	**5.4**	**1.2**	**0.9**	**0.7**	**3.0**	**1.1**	**1.7**	**1.4**	**0.5**	**4.0**	**0.9**	**0.4**	**0.5**

Note: See technical notes for further details about the Index, variable constructs and data sources.
Source: Bankwest Curtin Economics Centre | Authors' calculations from BCEC Early Learning Disadvantage Index



All of bottom ten areas in Queensland on the Early Learning Disadvantage Index, are located in regional, remote and very remote regions across the state

The ten most disadvantaged areas in Qld are located in remote and regional areas throughout the state, with Carpentaria ranked the most disadvantaged (Table 16). The most advantaged communities have a Major City status and are generally located in Brisbane, with Fig Tree Pocket ranked first, followed by Clear Island Waters and Spring Hill.

Many of the most disadvantaged communities are also characterised by a higher proportion of Indigenous children aged 0-5 years, with the share of Indigenous children averaging 37 per cent. This compares to 0.4 per cent in the most advantaged areas.

Children living in the most disadvantaged areas in QLD are less likely to be accessing the benchmark of 15 hours of preschool each week in their year before school, than the national average. Around one-fifth of enrolled children are not attending preschool for 15 or more hours each week, compared to only 1.5 per cent of children in the most advantaged areas.

Children in the most disadvantaged areas also have high rates of developmental vulnerabilities, with 44 per cent of children assessed as developmentally vulnerable on one or more domain and almost 1 in 3 developmentally vulnerable on two or more domains. The former is as high as 62 per cent for children in Torres Strait Islands.

Across QLD, a lack of access to services in many of the disadvantaged areas is evident, with 1 in 5 children living in households that do not have access to the internet. This is as high as 40 per cent in Carpentaria.

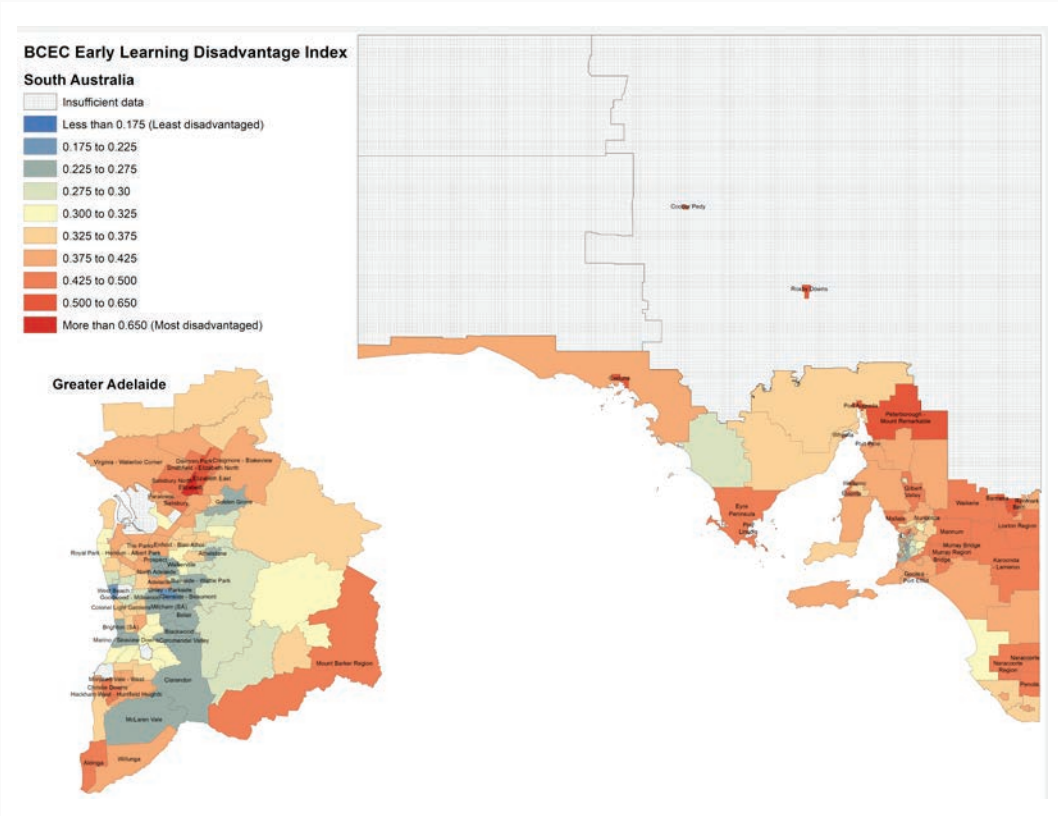
SOUTH AUSTRALIA

As with other states and territories, most of South Australia's population is located in its capital – Adelaide, with fewer children living in the large remote geographic regions further from the coastline. These remote regions of South Australia, including Ceduna, Outback and Coober Pedy while sparsely populated also have high levels of relative early learning disadvantage relative Disadvantage also exists within a number of regional areas including Mount Remarkable, Eyre Peninsula and Murray Bridge and in northern city areas of Elizabeth and its surrounding suburbs. More advantaged areas are located in the inner city areas through to the Adelaide Hills region.

Clusters of early learning disadvantage exist on the fringes of Melbourne.

FIGURE 39

Early learning disadvantage in South Australia



Note: The Statistical Area level 2 (SA2) classification has been used as the spatial unit to assess early learning disadvantage across Australian regions. Data are broken using natural breaks, which classifies the data by maximising the differences between each class.
Source: Bankwest Curtin Economics Centre | Authors' calculations from numerous data sources.

TABLE 17

Most and least disadvantaged in early learning: South Australia

AUSTRALIA				Pre-school attendance				Internet	Child development		School resources	Demographic			Economic resources		Family		Housing			Caring	Population	
	Local area (SA2)	State/Territory	Remoteness	Share in YBFS enrolled in pre-school, not accessing 15+ hours	Share not in YBFS enrolled in pre-school, not accessing 15+ hours	Share of 3 year olds not attending pre-school	Share of 4 year olds not attending pre-school	Share of families with no internet access	Share of children vulnerable on AEDC domains		Pre-school student-teacher ratio (SA3)	Share of ATSI 0-5 year olds	English non-competency among 0-5 year olds	SEIFA score	Average equivalised household income	unemploy-ment rate	Average number of children in family	Share of one-parent families	Share of households under rental stress	Share of households under mortgage stress	Homeless-ness rate	Share of people who care for own children	Population of children in pre-school	Population of 0-5 year olds
	Most Advantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	West Beach	SA	Major City	0.0	7.5	76.0	37.0	2.1	8.7	2.2	16.5	0.0	7.2	1,053	947	2.2	1.8	6.9	10.0	5.1	10.0	18.1	94	268
2	Unley - Parkside	SA	Major City	17.6	6.3	61.6	26.7	3.0	8.1	4.7	9.4	0.3	7.5	1,084	1,089	3.0	1.8	8.8	9.3	4.8	19.7	18.1	379	1,062
3	Coromandel Valley	SA	Major City	25.4	0.0	71.0	23.9	1.4	16.7	4.5	17.2	1.2	3.6	1,091	1,068	1.9	1.9	8.6	2.0	7.4	7.2	25.0	105	322
4	Toorak Gardens	SA	Major City	16.2	5.3	57.0	29.4	1.9	17.0	9.0	11.4	0.6	11.2	1,091	1,086	3.0	1.8	8.0	10.1	4.7	1.9	19.6	304	826
5	Blackwood	SA	Major City	17.4	7.7	73.1	31.0	0.7	15.1	4.8	11.5	0.9	2.7	1,088	1,050	2.0	1.8	7.7	4.1	7.2	15.5	22.9	274	815
6	Burnside - Wattle Park	SA	Major City	10.0	9.0	66.0	35.3	2.3	13.3	8.3	11.4	0.6	12.7	1,098	1,090	2.6	1.8	8.3	8.3	5.8	10.5	20.4	367	1,058
7	Mitcham (SA)	SA	Major City	14.3	7.2	71.1	31.9	1.6	13.9	7.3	11.5	0.3	7.4	1,099	1,107	1.8	1.9	8.3	7.2	6.1	17.5	20.2	278	860
8	Walkerville	SA	Major City	29.7	5.7	63.2	26.1	2.2	11.8	7.5	9.4	1.1	10.1	1,093	1,104	3.7	1.8	7.3	8.5	4.6	32.7	16.5	127	353
9	Tanunda	SA	Inner Regional	0.0	7.5	86.5	35.5	3.9	10.7	6.9	15.5	3.3	0.0	992	821	2.4	1.8	8.7	8.7	3.9	11.1	17.9	85	274
10	North Adelaide	SA	Major City	38.7	17.4	45.8	30.0	2.4	10.5	5.3	1.8	2.7	8.0	1,096	1,255	2.0	1.6	5.8	15.8	3.5	25.7	8.3	54	184
	AVERAGE			**16.9**	**7.4**	**67.1**	**30.7**	**2.2**	**12.6**	**6.1**	**11.6**	**1.1**	**7.0**	**1,079**	**1,062**	**2.5**	**1.8**	**7.8**	**8.4**	**5.3**	**15.2**	**18.7**	**207**	**602**
	Most Disadvantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	Elizabeth	SA	Major City	57.2	33.3	89.5	54.3	15.4	63.9	38.7	17.7	10.8	20.8	730	477	38.3	1.9	21.9	23.8	5.7	123.4	15.7	195	786
2	Ceduna	SA	Very Remote	55.0	51.4	82.1	53.5	12.9	42.2	20.0	12.3	36.9	2.5	941	837	8.2	1.9	14.7	8.2	3.4	108.7	16.9	77	198
3	Roxby Downs	SA	Remote	59.7	16.1	87.0	45.2	2.7	53.1	32.1	9.1	4.8	2.9	1,014	1,632	1.0	2.0	7.7	3.2	3.1	8.7	31.0	139	456
4	Port Augusta	SA	Outer Regional	61.6	56.6	74.5	40.7	16.3	31.0	19.0	9.1	32.8	1.8	877	726	10.5	1.9	15.0	9.9	3.8	78.6	16.6	258	961
5	Peterborough - Mount Remarkable	SA	Outer Regional	27.0	48.3	90.9	50.0	10.9	46.6	22.4	9.2	14.7	0.0	916	557	7.2	1.9	8.1	4.0	3.7	42.3	13.6	66	252
6	Smithfield - Elizabeth North	SA	Major City	49.4	28.6	84.5	56.3	13.8	37.8	21.5	17.7	11.2	5.4	759	499	26.3	1.9	24.8	20.9	7.7	32.0	18.3	260	1,082
7	Barmera	SA	Outer Regional	50.8	54.5	87.5	53.1	8.6	30.0	18.6	13.5	8.2	0.0	914	666	7.1	1.9	9.9	6.3	5.5	34.1	16.7	94	366
8	Elizabeth East	SA	Major City	48.6	25.0	88.5	48.9	10.1	39.2	23.2	17.7	8.0	10.1	845	612	16.0	1.9	17.7	13.3	7.7	46.1	18.6	283	1,023
9	Davoren Park	SA	Major City	34.0	24.9	86.1	44.2	12.9	38.8	22.9	17.7	7.8	7.6	799	580	19.3	2.0	26.5	20.7	9.0	36.6	24.5	580	2,131
10	Penola	SA	Outer Regional	68.9	29.2	80.0	48.6	9.2	25.0	17.3	12.4	3.7	0.0	935	721	4.5	1.9	9.0	4.0	4.2	0.0	20.5	69	244
	AVERAGE			**51.2**	**36.8**	**85.1**	**49.5**	**11.3**	**40.8**	**23.6**	**13.6**	**13.9**	**5.1**	**873**	**731**	**13.8**	**1.9**	**15.5**	**11.4**	**5.4**	**51.1**	**19.2**	**202**	**750**
	Average - AUSTRALIA			**14.7**	**16.7**	**70.9**	**42.1**	**6.7**	**21.9**	**11.4**	**21.9**	**6.9**	**7.7**	**997**	**908**	**5.5**	**1.8**	**10.2**	**10.3**	**7.0**	**60**	**19.8**	**250**	**776**
	Ratio - MOST vs LEAST disadvantage			**3.0**	**5.0**	**1.3**	**1.6**	**5.3**	**3.2**	**3.9**	**1.2**	**12.6**	**0.7**	**0.8**	**0.7**	**5.6**	**1.1**	**2.0**	**1.4**	**1.0**	**3.4**	**1.0**	**1.0**	**1.2**
	Ratio - Australian Average vs LEAST disadvantage			**3.5**	**2.2**	**1.2**	**1.2**	**1.7**	**1.9**	**2.1**	**0.6**	**2.0**	**0.7**	**0.9**	**0.8**	**2.5**	**1.0**	**1.5**	**1.1**	**0.8**	**0.8**	**1.0**	**0.8**	**1.0**

Note: See technical notes for further details about the Index, variable constructs and data sources.
Source: Bankwest Curtin Economics Centre | Authors' calculations from BCEC Early Learning Disadvantage Index

The top and bottom ten areas of early learning disadvantage within South Australia again demonstrate the divide that exists between children that have considerable advantage and those that do not (Table 17).

Of note is the very high proportion of children (in their year before formal schooling) that are enrolled in preschool and are not accessing 15 or more hours of preschool each week. Over 50 per cent of children in the most disadvantaged areas are attending preschool for less than 15 hours each week, compared to 14.7 per cent nationally. This also compares starkly with children in the top ten areas in SA where only 17 per cent are not attending preschool for more than 15 hours each week in their year before full-time schooling.

The very high rates of developmental vulnerability for children in the most disadvantaged areas is therefore not surprising. SA children living in the ten most disadvantaged areas are more than twice as likely to be developmentally vulnerable on two or more domains in their first year of schooling compared to the national average.

Over 40 per cent are developmentally vulnerable on one or more domains, compared to 22 per cent for children nationally, and 12.6 per cent for children in the most advantaged areas of SA.

As is the case for other States, the bottom ten areas (those with the most disadvantage) have relatively lower internet access, lower incomes and higher unemployment rates than the most advantaged areas.

Over 50% of enrolled children in the most disadvantaged areas in SA are attending preschool for less than 15 hours each week, compared to around 15 per cent nationally.

TASMANIA

Very few advantaged areas of early learning advantage exist in Tasmania.

English non-competency is less of a feature for the most disadvantaged areas relative to the most advantaged areas in Tasmania.

Most areas across Tasmania have moderate to high levels of early learning disadvantage, extending across the state and city areas (Figure 40). Very few advantaged areas exist and all are located in major urban areas of Hobart, Devonport and Launceston and include Sandy Bay, Trevallyn, Miandetta, Legana and Newstead.

As with most capital cities, disadvantage increases the further from the city centre and water views.

Children living across the island but particularly in the east coast and north-east areas face relatively high early learning disadvantage.

A comparison on of the top and bottom ten areas within the state of Tasmania (Tas) shows that level of remoteness is less of an indicator of disadvantage, although six of the then most disadvantaged areas are in outer regional locations (Table 18).

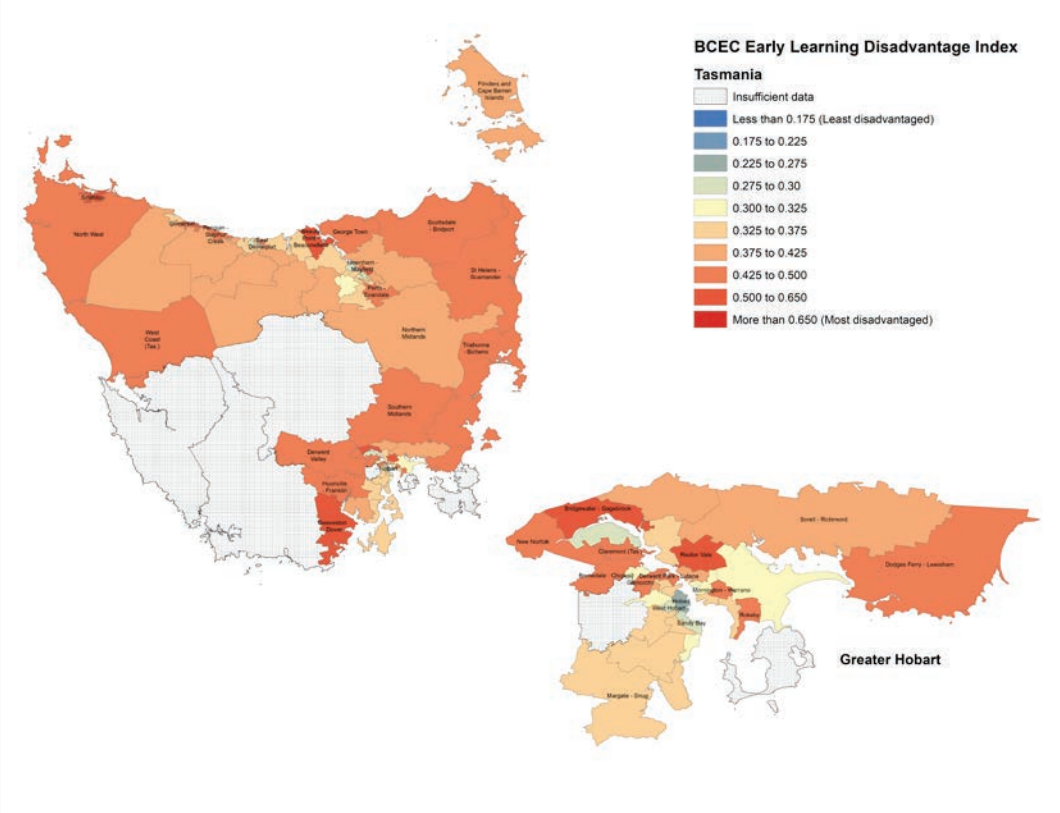
Interestingly, English non-competency is less of a feature for the most disadvantaged areas relative to the most advantaged areas in Tas, with an average of 5.5 per cent for the most advantaged areas compared to 0.5% for the most disadvantaged ten SA2 regions. Both are lower than the national average of 7.7 per cent. The most disadvantaged areas have a greater share of children living in single parent families, standing at 16 per cent. This compares to 9.7 per cent for the most advantaged areas and 10.2 per cent for the national average.

The most disadvantaged areas in Tas are characterised by lower rates of children in their year before schooling accessing preschool for the prescribed 15+ hours each week (75% compared to 82% for the most advantaged) and higher rates of children that are developmentally vulnerable on one or more or two or more domains – almost 1.6 times the national rate and 3.4 times the rate of children livening in the most advantaged areas in the state.

Over 1 in ten families have no access to the internet in Tas – a resource that is becoming increasingly important in delivering and helping with education, and has become even more important nationally with a forced shift to remote learning for periods during the COVID-19 pandemic.

FIGURE 40

Early learning disadvantage in Tasmania



Note:The Statistical Area level 2 (SA2) classification has been used as the spatial unit to assess early learning disadvantage across Australian regions. Data are broken using natural breaks, which classifies the data by maximising the differences between each class.
Source: Bankwest Curtin Economics Centre | Authors' calculations from numerous data sources.

TABLE 18

Most and least disadvantaged in early learning: Tasmania

AUSTRALIA				Pre-school attendance				Internet	Child development		School resources	Demographic			Economic resources		Family			Housing		Caring	Population	
	Local area (SA2)	State/Territory	Remoteness	Share in YBFS enrolled in pre-school, not accessing 15+ hours	Share not in YBFS enrolled in pre-school, not accessing 15+ hours	Share of 3 year olds not attending pre-school	Share of 4 year olds not attending pre-school	Share of families with no internet access	Share of children vulnerable on AEDC domains		Pre-school student-teacher ratio (SA3)	Share of ATSI 0-5 year olds	English non-competency among 0-5 year olds	SEIFA score	Average equivalised household income	unemploy-ment rate	Average number of children in family	Share of one-parent families	Share of households under rental stress	Share of households under mortgage stress	Homeless-ness rate	Share of people who care for own children	Population of children in pre-school	Population of 0-5 year olds
	Most Advantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	Hobart	TAS	Inner Regional	7.1	15.6	63.3	61.1	4.0	11.4	2.9	12.4	4.5	10.1	1,037	992	6.5	1.6	9.0	18.9	3.0	101.5	9.7	74	244
2	Sandy Bay	TAS	Inner Regional	16.5	6.1	67.0	72.2	2.1	8.3	5.2	12.4	1.8	10.5	1,080	985	1.6	1.7	6.4	14.7	3.5	44.9	14.1	223	512
3	West Hobart	TAS	Inner Regional	5.1	11.6	75.9	73.0	2.0	13.8	1.5	12.4	0.0	4.2	1,063	1,036	3.2	1.7	10.7	10.3	3.4	22.7	19.2	128	340
4	Trevallyn	TAS	Inner Regional	13.3	12.2	82.1	56.9	3.6	11.7	3.3	19.8	6.1	1.2	1,025	861	3.1	1.9	9.3	8.3	4.0	6.9	21.0	109	312
5	Miandetta - Don	TAS	Inner Regional	22.7	24.1	67.4	67.3	5.1	3.7	1.9	22.7	10.6	1.9	956	774	3.3	1.9	10.7	7.1	5.9	0.0	22.0	73	265
6	Legana	TAS	Inner Regional	0.0	28.3	76.4	77.1	3.7	6.8	3.4	19.8	3.0	1.1	998	784	2.2	1.9	6.9	5.0	5.7	12.6	21.2	115	271
7	Austins Ferry - Granton	TAS	Inner Regional	7.3	0.0	83.6	78.4	5.3	9.3	3.7	29.1	7.1	1.4	970	857	4.5	1.8	9.6	5.7	6.3	20.7	21.7	87	283
8	Newstead	TAS	Inner Regional	6.6	15.8	75.0	73.9	3.2	13.0	4.3	19.8	4.2	7.5	983	748	3.8	1.9	12.6	14.1	3.8	61.2	21.1	118	331
9	Taroona - Bonnet Hill	TAS	Inner Regional	27.3	0.0	77.1	70.3	0.7	10.0	7.5	19.8	3.8	5.1	1,089	993	2.5	1.9	9.4	5.6	3.0	31.9	20.5	53	184
10	Launceston	TAS	Inner Regional	9.7	18.2	74.0	50.0	4.3	16.7	10.4	19.8	2.5	10.8	1,023	892	7.0	1.8	11.9	15.8	3.4	55.6	15.6	75	237
	AVERAGE			**11.6**	**13.2**	**74.2**	**68.0**	**3.4**	**10.5**	**4.4**	**18.8**	**4.4**	**5.4**	**1,022**	**892**	**3.8**	**1.8**	**9.7**	**10.6**	**4.2**	**35.8**	**18.6**	**106**	**298**
	Most Disadvantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	Bridgewater - Gagebrook	TAS	Inner Regional	24.0	28.6	87.8	84.1	21.1	45.1	27.3	21.7	24.3	0.7	722	490	28.4	2.0	31.6	22.0	3.9	34.3	20.0	181	683
2	Geeveston - Dover	TAS	Outer Regional	18.9	28.6	89.3	82.9	11.5	43.8	34.4	24.1	27.1	0.0	903	561	7.0	1.9	8.8	6.1	6.8	22.1	15.2	67	181
3	Risdon Vale	TAS	Inner Regional	37.9	17.9	84.1	73.3	14.3	37.9	27.6	23.2	10.8	0.0	827	587	15.9	1.8	19.3	10.6	4.2	44.9	17.1	57	223
4	Beauty Point - Beaconsfield	TAS	Outer Regional	12.5	16.0	84.2	73.7	12.0	44.0	36.0	23.8	8.7	0.0	877	544	8.6	1.8	10.0	7.7	5.2	13.9	13.5	73	184
5	Smithton	TAS	Outer Regional	25.5	32.4	82.6	84.1	9.9	38.6	22.7	40.3	35.5	1.2	887	709	5.2	1.9	10.5	7.1	4.1	23.6	19.2	81	251
6	Ravenswood	TAS	Inner Regional	24.1	50.0	76.4	76.9	18.1	26.0	20.0	19.8	24.2	0.0	731	485	18.2	1.8	24.9	21.4	4.3	36.1	17.7	82	297
7	Burnie - Wivenhoe	TAS	Outer Regional	24.4	30.4	85.1	70.7	8.9	40.5	19.0	33.5	12.6	1.2	868	623	12.6	1.7	17.3	15.6	3.9	131.7	17.2	68	253
8	East Devonport	TAS	Inner Regional	28.9	32.3	89.1	72.7	12.7	28.3	17.0	22.7	20.5	1.0	818	547	11.7	1.8	18.4	17.8	3.3	30.1	15.6	76	307
9	North West	TAS	Outer Regional	37.0	31.0	83.6	86.8	10.0	25.0	14.1	40.3	19.4	0.9	942	712	3.3	2.0	6.1	3.6	6.2	28.1	21.6	102	319
10	Romaine - Havenview	TAS	Outer Regional	22.4	41.0	79.3	71.4	8.1	28.2	23.1	33.5	16.7	0.0	915	694	5.9	1.8	13.1	9.2	4.9	18.2	20.8	88	246
	AVERAGE			**25.6**	**30.8**	**84.1**	**77.7**	**12.7**	**35.7**	**24.1**	**28.3**	**20.0**	**0.5**	**849**	**595**	**11.7**	**1.9**	**16.0**	**12.1**	**4.7**	**38.3**	**17.8**	**88**	**294**
	Average - AUSTRALIA			**14.7**	**16.7**	**70.9**	**42.1**	**6.7**	**21.9**	**11.4**	**21.9**	**6.9**	**7.7**	**997**	**908**	**5.5**	**1.8**	**10.2**	**10.3**	**7.0**	**60**	**19.8**	**250**	**776**
	Ratio - MOST vs LEAST disadvantage			**2.2**	**2.3**	**1.1**	**1.1**	**3.7**	**3.4**	**5.5**	**1.5**	**4.6**	**0.1**	**0.8**	**0.7**	**3.1**	**1.0**	**1.7**	**1.1**	**1.1**	**1.1**	**1.0**	**0.8**	**1.0**
	Ratio - Australian Average vs LEAST disadvantage			**1.7**	**1.8**	**1.2**	**1.8**	**1.9**	**1.6**	**2.1**	**1.3**	**2.9**	**0.1**	**0.9**	**0.7**	**2.1**	**1.0**	**1.6**	**1.2**	**0.7**	**0.6**	**0.9**	**0.4**	**0.4**

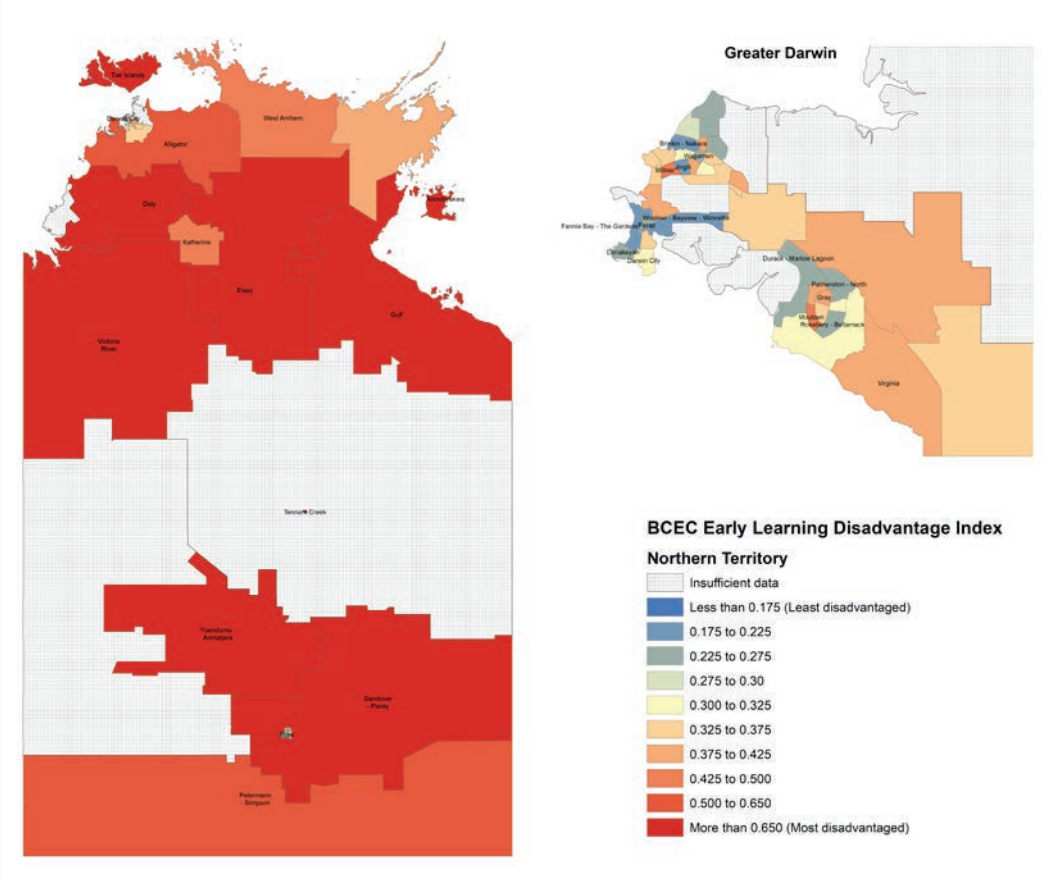
Note: See technical notes for further details about the Index, variable constructs and data sources.
Source: Bankwest Curtin Economics Centre | Authors' calculations from BCEC Early Learning Disadvantage Index

NORTHERN TERRITORY

Regional areas of the Northern Territory are typified by high levels of early learning disadvantage with the level of remoteness and Indigenous communities a feature of these areas (Figure 41). Darwin has a greater variation in early learning disadvantage, with a number of pockets of advantage mixed with more disadvantaged areas. The more advantaged areas include coastal areas of Darwin such as Fannie Bay, Larrakeyah and Brinkin-Nakara, while children living in Virginia, Millner and Moulden Rosebury are facing greater disadvantage.

FIGURE 41

Early learning disadvantage in Northern Territory



Note: The Statistical Area level 2 (SA2) classification has been used as the spatial unit to assess early learning disadvantage across Australian regions. Data are broken using natural breaks, which classifies the data by maximising the differences between each class.
Source: Bankwest Curtin Economics Centre | Authors' calculations from numerous data sources.

Some 43 per cent of four year old children in the most disadvantaged areas of NT do not attend preschool.

60 per cent of children in the most disadvantaged areas in the NT are developmentally vulnerable on one or more domains and almost one in two vulnerable on two or more developmental domains.

The most disadvantaged areas in the NT are very remote Indigenous communities, with many of Indigenous people speaking their native language within the community. Providing services to families and children in these areas is often met with a number of barriers and challenges, not least of which is location, but also engaging with families and children in their native dialect, and in a culturally appropriate manner.

The average share of Indigenous children in the most disadvantaged areas in the NT is almost 8 times higher than the least disadvantaged areas.

Some 43 per cent of four year old children in the most disadvantaged areas of NT do not attend preschool, compared to 26 per cent in the most advantaged areas. Of those that are enrolled in preschool in the year before formal schooling, 38 per cent of children in the most disadvantaged areas are not accessing 15 or more hours. This compares to only 5.4 per cent for the most advantaged areas.

On average 60 per cent of children in the most disadvantaged areas in the NT are developmentally vulnerable on one or more domains and almost one in two vulnerable on two or more developmental domains. This former reaches up to 78.3 per cent of children living in the Tiwi Islands. In comparison, 12.1 per cent of children in the most advantaged areas in the NT are vulnerable on one or more and 5.7 per cent on two or more domains.

Many of the most disadvantaged areas of NT display very high unemployment levels, low average equivalised household income levels and, in general, have very high levels of socioeconomic disadvantage as is demonstrated by the low SEIFA scores.

TABLE 19

Most and least disadvantaged in early learning: Northern Territory

AUSTRALIA				Pre-school attendance				Internet	Child development		School resources	Demographic			Economic resources		Family		Housing			Caring	Population	
	Local area (SA2)	State/Territory	Remoteness	Share in YBFS enrolled in pre-school, not accessing 15+ hours	Share not in YBFS enrolled in pre-school, not accessing 15+ hours	Share of 3 year olds not attending pre-school	Share of 4 year olds not attending pre-school	Share of families with no internet access	Share of children vulnerable on AEDC domains		Pre-school student-teacher ratio (SA3)	Share of ATSI 0-5 year olds	English non-competency among 0-5 year olds	SEIFA score	Average equivalised household income	unemploy-ment rate	Average number of children in family	Share of one-parent families	Share of households under rental stress	Share of households under mortgage stress	Homeless-ness rate	Share of people who care for own children	Population of children in pre-school	Population of 0-5 year olds
	Most Advantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	Fannie Bay - The Gardens	NT	Outer Regional	0.0	9.1	89.3	20.7	2.6	10.3	0.0	23.8	5.0	8.0	1,110	1,576	1.6	1.7	4.4	9.9	3.9	112.6	15.8	63	180
2	Jingili	NT	Outer Regional	0.0	0.0	100.0	16.7	5.2	9.7	0.0	16.3	13.0	5.8	1,047	1,323	6.4	1.8	12.2	5.1	6.2	72.7	22.5	41	138
3	Woolner - Bayview - Winnellie	NT	Outer Regional	11.8	26.1	75.0	22.2	2.4	2.9	2.9	23.8	4.3	4.3	1,138	1,725	2.4	1.8	5.1	8.6	4.3	41.6	16.4	57	186
4	Brinkin - Nakara	NT	Outer Regional	14.9	0.0	71.4	29.4	5.3	8.8	3.5	16.3	9.9	18.4	1,069	1,274	5.3	1.8	7.8	9.7	6.1	249.9	17.0	74	233
5	Ross	NT	Remote	0.0	0.0	76.2	43.3	15.2	0.0	0.0	16.9	36.8	3.0	954	1,091	1.4	1.9	8.0	8.0	5.8	303.4	13.2	37	136
6	Larrakeyah	NT	Outer Regional	0.0	16.7	72.7	25.6	1.6	17.5	12.5	23.8	1.3	15.0	1,120	1,674	2.1	1.8	3.6	12.4	3.1	190.8	15.8	73	226
7	Rosebery - Bellamack	NT	Outer Regional	0.0	10.0	87.5	22.1	5.0	17.9	9.4	37.3	10.9	4.6	1,082	1,389	2.3	2.0	9.1	12.0	5.9	4.6	33.2	258	902
8	Durack - Marlow Lagoon	NT	Outer Regional	9.3	0.0	79.5	31.6	3.7	21.7	8.4	37.3	7.6	2.6	1,112	1,490	2.0	1.9	6.6	8.3	6.4	84.6	29.1	124	474
9	Palmerston - North	NT	Outer Regional	3.6	0.0	85.5	37.5	2.3	16.7	12.8	37.3	11.0	3.8	1,095	1,447	2.3	1.9	8.9	9.4	6.4	133.8	30.0	140	492
10	Wagaman	NT	Outer Regional	14.3	0.0	88.6	15.0	10.3	15.8	7.9	16.3	9.4	20.7	997	1,034	5.4	1.9	10.7	10.7	7.1	14.2	17.1	34	149
	AVERAGE			**5.4**	**6.2**	**82.6**	**26.4**	**5.4**	**12.1**	**5.7**	**24.9**	**10.9**	**8.6**	**1,072**	**1,402**	**3.1**	**1.9**	**7.6**	**9.4**	**5.5**	**120.8**	**21.0**	**90**	**312**
	Most Disadvantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	Yuendumu - Anmatjere	NT	Very Remote	36.0	44.1	64.7	41.7	85.2	68.9	53.3	16.9	96.6	70.0	604	464	11.0	2.2	17.2	0.9	0.0	1677.5	24.7	109	232
2	Gulf	NT	Very Remote	43.1	42.9	80.4	57.5	42.1	72.7	60.7	11.1	95.2	31.1	695	437	14.8	2.3	19.4	5.1	0.0	2481.2	20.9	79	501
3	Victoria River	NT	Very Remote	36.7	0.0	53.8	47.5	56.7	72.7	60.7	11.1	92.3	35.8	719	558	7.8	2.4	18.0	7.0	0.0	1102.7	15.7	55	286
4	Elsey	NT	Very Remote	36.4	57.1	86.4	38.9	47.2	63.6	50.0	11.1	86.3	56.1	725	436	9.6	2.1	15.3	6.5	0.7	1610.0	22.7	47	248
5	Daly	NT	Remote	35.2	60.0	63.0	54.3	37.8	61.5	53.8	30.7	88.0	31.6	760	536	9.3	2.3	19.7	4.9	1.1	1138.0	24.8	84	216
6	Sandover - Plenty	NT	Very Remote	37.0	23.5	57.7	49.2	48.2	64.7	54.9	16.9	91.9	40.1	667	402	8.6	2.2	19.5	3.7	0.0	1789.2	16.1	63	356
7	Tiwi Islands	NT	Very Remote	21.6	0.0	88.5	44.8	21.9	78.3	60.9	30.7	93.8	31.6	728	359	13.9	2.2	16.6	9.9	0.0	616.0	17.7	57	208
8	Tennant Creek	NT	Very Remote	38.6	19.2	86.1	33.3	30.0	57.1	46.4	21.8	66.0	9.8	891	1,007	8.3	2.1	17.7	9.7	1.5	1001.3	14.8	109	288
9	Anindilyakwa	NT	Very Remote	7.1	0.0	85.2	14.3	50.2	50.0	48.0	24.8	61.3	17.1	801	1,625	6.4	2.2	12.1	1.0	0.0	1223.0	20.1	56	235
10	Petermann - Simpson	NT	Very Remote	88.9	0.0	84.0	50.0	62.7	0.0	0.0	16.9	64.3	19.8	832	941	3.1	1.8	11.2	3.8	0.0	240.9	12.0	18	129
	AVERAGE			**38.1**	**24.7**	**75.0**	**43.2**	**48.2**	**59.0**	**48.9**	**19.2**	**83.6**	**34.3**	**742**	**677**	**9.3**	**2.2**	**16.7**	**5.3**	**0.3**	**1288.0**	**19.0**	**68**	**270**
	Average - AUSTRALIA			**14.7**	**16.7**	**70.9**	**42.1**	**6.7**	**21.9**	**11.4**	**21.9**	**6.9**	**7.7**	**997**	**908**	**5.5**	**1.8**	**10.2**	**10.3**	**7.0**	**60**	**19.8**	**250**	**776**
	Ratio - MOST vs LEAST disadvantage			**7.1**	**4.0**	**0.9**	**1.6**	**9.0**	**4.9**	**8.5**	**0.8**	**7.7**	**4.0**	**0.7**	**0.5**	**3.0**	**1.2**	**2.2**	**0.6**	**0.1**	**10.7**	**0.9**	**0.8**	**0.9**
	Ratio - Australian Average vs LEAST disadvantage			**2.6**	**1.5**	**1.1**	**1.0**	**7.2**	**2.7**	**4.3**	**0.9**	**12.2**	**4.4**	**0.7**	**0.7**	**1.7**	**1.2**	**1.6**	**0.5**	**0.0**	**21.4**	**1.0**	**0.3**	**0.3**

Note: See technical notes for further details about the Index, variable constructs and data sources.
Source: Bankwest Curtin Economics Centre | Authors' calculations from BCEC Early Learning Disadvantage Index

AUSTRALIAN CAPITAL TERRITORY

The Australian Capital Territory is consistently characterised as a location with relatively little disadvantage when compared other areas across Australia. The population is highly educated, highly engaged in the labour force and has access to the highest earnings among states and territories.

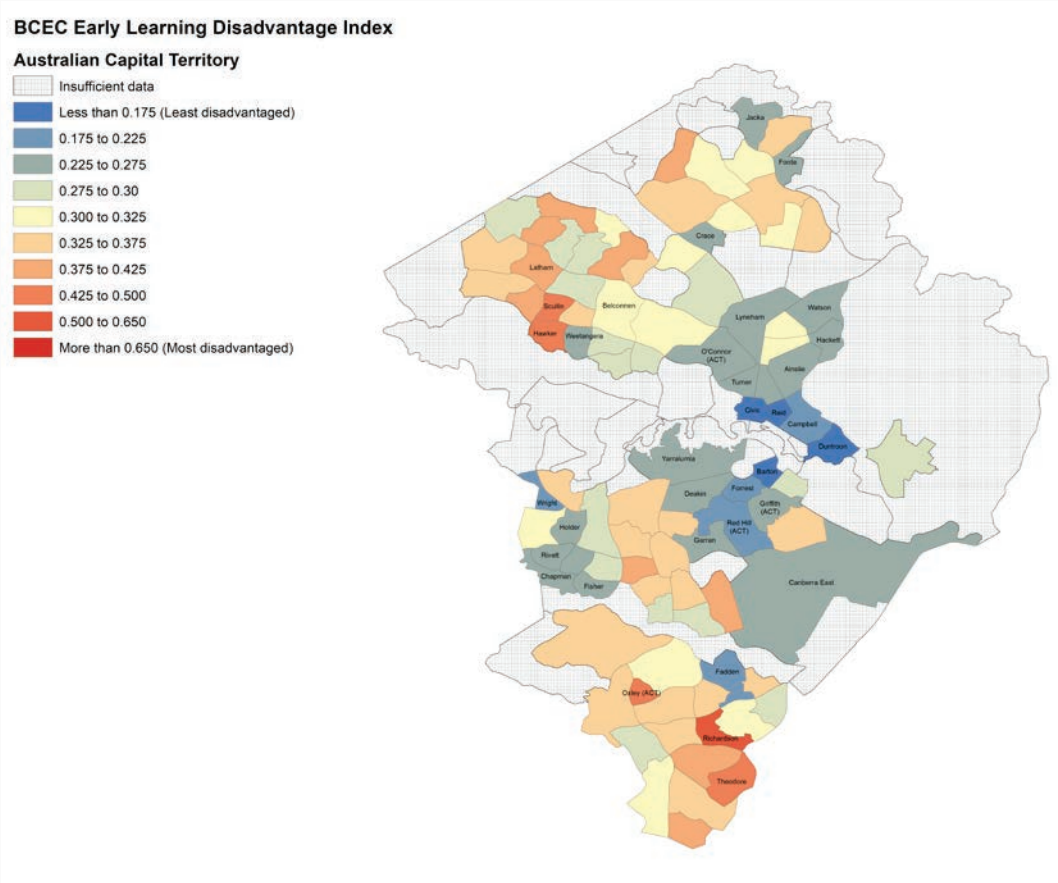
Children in the ACT are more likely to be attending preschool for more than 15 hours per week, with relatively fewer children presenting as developmentally vulnerable.

The map of the Australian Capital Territory also demonstrates this consistent pattern of advantage, with very few suburbs having medium to high disadvantage as measured by the Early Learning Disadvantage Index.

Richardson, Theodore, Oxley, Hawker and Scullin stand out as having relatively higher disadvantage. Children living in the inner city suburbs surrounding Lake Burley Griffin within the parliamentary triangle are the least likely to be experiencing early learning disadvantage.

FIGURE 42

Early learning disadvantage in Australian Capital Territory



Note: The Statistical Area level 2 (SA2) classification has been used as the spatial unit to assess early learning disadvantage across Australian regions. Data are broken using natural breaks, which classifies the data by maximising the differences between each class
Source: Bankwest Curtin Economics Centre | Authors' calculations from numerous data sources.

Children in the most disadvantaged areas in the ACT are 2.8 times more likely to be developmentally vulnerable on one or more domains and 6.4 times more likely to be developmentally vulnerable on two or more domains compared to the most advantaged areas in the capital.

Looking closely at the least and most disadvantaged areas within the ACT, there are substantial differences in children presenting with developmental vulnerability.

Children in the most disadvantaged areas in the ACT are 2.8 times more likely to be developmentally vulnerable on one or more domain (40.1% compared to 14.1%) and 6.4 times more likely to be developmentally vulnerable on two or more domains (24.0% compared to 3.8%) compared to the most advantaged areas in the capital (Table 20).

Some of the more disadvantaged areas have a higher share of Indigenous children and single parent households, however overall, these remain relatively low or similar compared to the national average. Similar proportions of children have English language non-competency in both the least and most disadvantaged areas in the territory.

There are a number of similarities between the most and least disadvantaged areas within the ACT, which was not observed in other states and territories. The proportion of children accessing less than 15 hours of preschool each week is similar, around 18% for those in the bottom 10 and 13.6% for those in the top 10, which is in line with the national average of 14.7 per cent. There is quite a degree of variation within both listings however. Within the bottom 10, Theodore records the highest proportion of children in their year before schooling receiving less than 15 hours of preschool each week (30.9%). O'Connor, which is listed in the top ten also has a relatively high proportion of lower access, standing at 24.1% .

TABLE 20

Most and least disadvantaged in early learning: Australian Capital Territory

AUSTRALIA				Pre-school attendance				Internet	Child development		School resources	Demographic			Economic resources		Family		Housing			Caring	Population	
	Local area (SA2)	State/Territory	Remoteness	Share in YBFS enrolled in pre-school, not accessing 15+ hours	Share not in YBFS enrolled in pre-school, not accessing 15+ hours	Share of 3 year olds not attending pre-school	Share of 4 year olds not attending pre-school	Share of families with no internet access	Share of children vulnerable on AEDC domains		Pre-school student-teacher ratio (SA3)	Share of ATSI 0-5 year olds	English non-competency among 0-5 year olds	SEIFA score	Average equivalised household income	unemploy-ment rate	Average number of children in family	Share of one-parent families	Share of households under rental stress	Share of households under mortgage stress	Homeless-ness rate	Share of people who care for own children	Population of children in pre-school	Population of 0-5 year olds
	Most Advantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	Campbell	ACT	Major City	13.3	0.0	81.0	20.0	1.2	13.3	3.3	11.3	0.0	10.1	1,158	1,668	2.4	1.8	5.6	7.3	2.2	470.2	17.8	64	152
2	Wright	ACT	Major City	5.5	0.0	78.0	37.1	1.1	10.9	4.3	0.0	0.0	10.9	1,168	1,594	0.8	1.7	6.0	4.3	13.0	0.0	23.2	95	268
3	Fadden	ACT	Major City	17.9	21.2	86.5	0.0	0.6	18.5	0.0	29.9	0.0	2.0	1,158	1,616	1.2	1.8	5.0	1.1	5.8	0.0	19.4	72	156
4	Red Hill (ACT)	ACT	Major City	12.2	0.0	54.5	38.5	3.2	16.1	6.5	8.8	0.0	5.6	1,133	1,686	0.9	1.9	10.3	6.9	4.4	58.3	20.2	74	166
5	Garran	ACT	Major City	12.2	0.0	72.2	35.1	1.7	14.7	5.3	16.8	1.7	13.2	1,137	1,486	1.5	1.9	5.6	5.7	3.4	0.0	22.6	112	241
6	Fisher	ACT	Major City	17.0	7.1	65.3	43.5	0.8	13.2	1.9	19.4	0.0	7.8	1,089	1,232	3.1	1.8	8.6	6.0	4.7	38.3	22.3	89	257
7	O'Connor (ACT)	ACT	Major City	24.1	7.1	77.8	28.3	2.8	7.8	3.1	11.3	2.3	7.7	1,110	1,372	3.4	1.8	8.1	11.6	3.4	88.1	17.9	124	303
8	Hackett	ACT	Major City	7.1	6.7	78.7	30.0	3.6	12.5	6.3	11.3	3.3	10.3	1,108	1,344	2.9	1.8	7.7	7.8	2.8	45.0	25.3	87	215
9	Crace	ACT	Major City	14.2	11.0	76.7	43.9	1.0	10.6	1.2	30.7	1.4	15.0	1,171	1,521	1.2	1.7	5.5	5.5	8.7	15.8	31.6	238	622
10	Turner	ACT	Major City	12.5	0.0	75.0	15.0	5.2	23.5	5.9	11.3	0.0	22.7	1,108	1,500	2.8	1.5	4.8	18.4	2.5	229.8	9.9	49	155
	AVERAGE			**13.6**	**5.3**	**74.6**	**29.1**	**2.1**	**14.1**	**3.8**	**15.1**	**0.9**	**10.5**	**1,134**	**1,502**	**2.0**	**1.8**	**6.7**	**7.5**	**5.1**	**94.6**	**21.0**	**100**	**254**
	Most Disadvantaged			%	%	%	%	%	1+ domain	2+ domains	ratio	%	%	#	$pw	%	avg.	%	%	%	per 10,000	%	Total	Total
1	Richardson	ACT	Major City	14.3	16.7	90.0	51.3	5.9	46.7	35.6	29.9	7.6	2.3	991	1,081	6.1	1.8	14.7	6.6	8.6	40.6	21.9	84	262
2	Hawker	ACT	Major City	12.5	26.3	81.5	53.1	1.3	44.4	27.8	26.4	0.0	10.2	1,103	1,317	3.9	1.9	9.5	7.3	3.6	27.0	19.6	43	177
3	Scullin	ACT	Major City	18.5	34.1	83.9	53.2	4.2	36.8	17.5	26.4	4.3	11.9	1,030	1,034	5.7	1.8	13.3	9.6	4.6	45.6	22.8	98	280
4	Oxley (ACT)	ACT	Major City	25.0	0.0	100.0	39.1	4.4	33.3	28.6	29.9	10.3	5.9	1,048	1,257	4.6	1.9	11.7	6.1	4.0	42.7	19.7	36	116
5	Theodore	ACT	Major City	30.9	12.8	87.9	36.8	3.1	40.0	22.2	29.9	6.3	3.6	1,055	1,278	4.4	1.9	12.2	5.6	9.2	10.7	23.9	94	303
6	Latham	ACT	Major City	21.2	13.2	90.5	43.9	3.5	40.8	20.4	26.4	3.6	5.4	1,049	1,131	4.0	1.9	10.2	6.8	6.8	8.4	23.9	105	303
7	Banks	ACT	Major City	24.1	11.6	95.5	43.4	3.4	36.5	17.7	29.9	5.3	3.9	1,055	1,216	2.8	1.9	11.7	5.5	9.2	8.2	26.4	152	471
8	Fraser	ACT	Major City	9.1	17.2	90.9	38.9	2.0	43.3	20.0	26.4	5.0	2.0	1,093	1,334	3.2	1.9	8.5	2.9	5.5	0.0	22.8	62	161
9	Casey	ACT	Major City	19.5	11.2	82.3	35.1	2.4	38.3	24.3	30.7	2.8	10.3	1,126	1,390	1.4	1.7	9.1	6.7	12.8	30.0	33.0	276	800
10	Evatt	ACT	Major City	8.9	3.6	84.4	39.4	3.1	40.8	26.3	26.4	1.8	6.1	1,074	1,232	3.5	1.8	9.3	4.7	5.3	30.8	21.9	174	433
	AVERAGE			**18.4**	**14.7**	**88.7**	**43.4**	**3.3**	**40.1**	**24.0**	**28.2**	**4.7**	**6.2**	**1,062**	**1,227**	**4.0**	**1.9**	**11.0**	**6.2**	**7.0**	**24.4**	**23.6**	**112**	**331**
	Average - AUSTRALIA			**14.7**	**16.7**	**70.9**	**42.1**	**6.7**	**21.9**	**11.4**	**21.9**	**6.9**	**7.7**	**997**	**908**	**5.5**	**1.8**	**10.2**	**10.3**	**7.0**	**60**	**19.8**	**250**	**776**
	Ratio - MOST vs LEAST disadvantage			**1.4**	**2.8**	**1.2**	**1.5**	**1.6**	**2.8**	**6.4**	**1.9**	**5.4**	**0.6**	**0.9**	**0.8**	**2.0**	**1.0**	**1.6**	**0.8**	**1.4**	**0.3**	**1.1**	**1.1**	**1.3**
	Ratio - Australian Average vs LEAST disadvantage			**1.3**	**0.9**	**1.3**	**1.0**	**0.5**	**1.8**	**2.1**	**1.3**	**0.7**	**0.8**	**1.1**	**1.4**	**0.7**	**1.0**	**1.1**	**0.6**	**1.0**	**0.4**	**1.2**	**0.4**	**0.4**

Note: See technical notes for further details about the Index, variable constructs and data sources.
Source: Bankwest Curtin Economics Centre | Authors' calculations from BCEC Early Learning Disadvantage Index

SUMMARY

The policy focus on the early years and early learning has seen a continued investment commitment by both Commonwealth and state and territory governments over the last decade through the National Partnership Agreement.

But has this partnership delivered on its 2020 promise? Are we ensuring that all children have the best start in life? Or are we unintentionally creating even greater inequality where despite the commitment of universality, a significant number of children are not accessing the requisite early learning in the year before schooling?

Undoubtedly access to early learning opportunities are providing positive outcomes for thousands of young children - improving their school readiness and serving as a point of identification of additional support or early intervention.

Yet children that early learning initiatives will likely best serve – those growing up facing greater disadvantage – are the very ones that are missing out on the support that for all intents and purposes was meant for them.

Our Early Learning Disadvantage Index is a sobering reminder of the level of inequality that exits across Australia's regions, where children living in the **most disadvantaged** areas are **ten times** more likely ***not* to be accessing 15 hours** of preschool each week in the year before school compared to children in the most advantaged areas.

Young children living in these areas are also **16 times more likely to be vulnerable** across multiple development domains, less likely to have access to the internet at home and if they are attending preschool, generally facing higher student to teacher ratios.

The link between socio-economic status and early learning disadvantage is evident in these communities, with many young children living in households with very low incomes and high rates of inadequate housing.

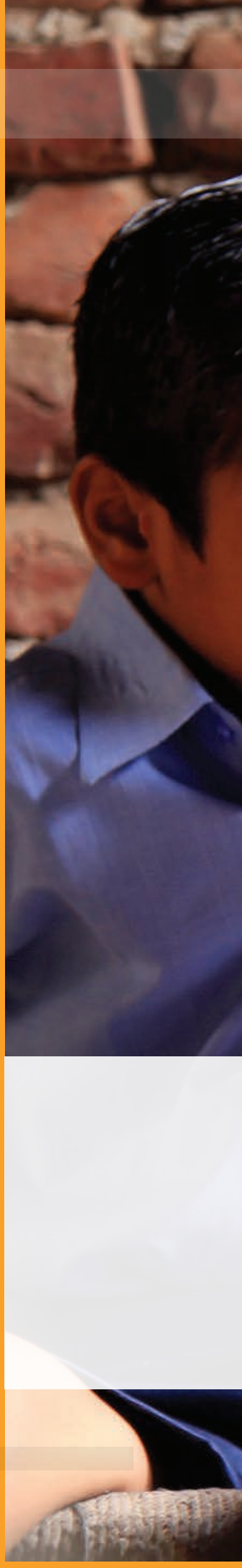
Some solutions to ensuring access to early learning and care are likely to be place-based, where community initiatives to overcome location-specific barriers will provide the greatest results. Identifying communities that are achieving positive early learning results against greater disadvantage, can provide guidance for policy makers and resource targeting.

Within Western Australia, a number stand out, including Two Rocks at the norther edge of Perth – a community with very low levels of early learning disadvantage yet higher general markers of socio-economic disadvantage.

In recognising the strength of place-based initiatives, the Department of Communities Early Years Initiative takes such an approach, committing to "work differently with communities to improve the development, health and learning of children from conception to four years and create lasting change (WA Department of Communities)."

Other solutions can and should be approached at a more macro-level, and include greater flexibility in preschool provision across the entire early childhood education and care sector, along with greater income support for families with young children. In the next chapter, we turn to the role that insufficient income and living cost pressures including the cost of child care, places on families with very young children and how this translates into a greater likelihood of living in poverty.

"UNDERSTANDING THE FINANCIAL RESOURCES A FAMILY CAN DRAW ON TO SUPPORT A BASIC STANDARD OF LIVING PROVIDES US WITH IMPORTANT INFORMATION ON BROADER ASPECTS OF WELLBEING AND DISADVANTAGE."



CHILD POVERTY AND DISADVANTAGE: PREVALENCE AND PROGRESS

HOW PREVALENT IS CHILD POVERTY IN WA AND AUSTRALIA?

The rate of child poverty can be assessed by calculating the share of children who live in households below 50 per cent of median household income.

The measure of income used to calculate poverty incidence is adjusted to account for family size (through *equivalisation*) and housing costs (by using income after deducting housing costs).

Understanding the financial resources a family can draw on to support a basic standard of living provides us with important information on broader aspects of wellbeing and disadvantage.

Household income poverty is one of the most common widely used and measures of financial disadvantage, and provides an indication of the minimum level of income required to maintain a basic standard of living for all members of a household.

In this *Focus on WA* report, we present a new analysis of child poverty, with a focus on the financial situation of families of young children under five. Child poverty rates are assessed by calculating the share of children living in families where the level of *equivalent* household disposable incomes falls below some fraction of the median.

The child poverty analysis prepared specially for this report uses detailed survey information drawn from the Australian Bureau of Statistics' (ABS) Survey of Income and Housing (SIH). The report combines pooled information from the 2003-04 SIH to the latest 2017-18 release, with all dollar measures uprated to reflect current patterns of income and spending.

An authentic comparison of financial wellbeing across a large constellation of households requires that we adjust (or 'equivalise') the income measure used in poverty assessments to take account of family size and composition. For example, a family with three children will require a significantly higher income than a single person to achieve the same standard of living.

The process of equivalisation is a method of adjusting household incomes to take account of the size and composition of household members. This allows us to compare more accurately the financial resources available to households of different sizes. Here, we use the OECD modified equivalence scales to standardise income. These scales apply 1.0 for the first adult in the household, 0.5 for any subsequent adults and 0.3 for children.[9]

The influence of housing costs and their impact on relative income poverty is controlled for by relating household incomes to national median values, but accounting for regional variation in the costs of housing (and other living essentials to some extent) through deducting housing costs from household disposable income.

Measurement of poverty

The *relative income poverty* measure involves identifying an income threshold (a 'poverty line') and classifying people as being in income poverty if they earn less than the threshold. A common threshold that is used is 50 per cent of the median income, where the income measure is appropriately adjusted for household size.

9 This implies that a couple with three children would require 2.4 times the income of a single adult in order that both families achieve broadly the same standard of living.

TABLE 21

Relative adult and child poverty rates, WA and Australia: 2003-04 to 2017-18

WESTERN AUSTRALIA - Relative poverty rates (%) Assessed at 50 per cent of median equivalised AHC income								
	2003/04	2005/06	2007/08	2009/10	2011/12	2013/14	2015/16	2017/18
Adults	9.6	10.9	11.8	12.0	10.8	9.1	11.9	12.1
Children	11.4	10.4	13.5	15.6	12.0	12.4	16.0	14.9
Children under 5	18.9	13.1	20.5	18.7	15.8	16.5	22.5	20.7
People	10.1	10.7	12.2	12.9	11.1	9.9	12.9	12.9

AUSTRALIA - Relative poverty rates (%) Assessed at 50 per cent of median equivalised AHC income								
	2003/04	2005/06	2007/08	2009/10	2011/12	2013/14	2015/16	2017/18
Adults	10.8	11.4	13.6	12.1	12.4	12.4	11.7	12.6
Children	12.3	14.5	17.2	16.3	15.5	15.4	15.1	16.4
Children under 5	16.8	15.7	21.3	20.1	19.1	18.2	17.7	19.6
People	11.2	12.2	14.5	13.1	13.2	13.1	12.5	13.5

Notes: Relative poverty rates and poverty counts are based, respectively, on the share and number of adults and children who live in households with incomes below 50 per cent of the median equivalised income after housing costs (AHC), including mortgage, rent and utilities costs. The OECD modified equivalence scale is used in poverty calculations for the comparison of incomes across households of different sizes.

Source: Bankwest Curtin Economics Centre | Authors' calculations from the ABS Survey of Income and Housing (SIH), 2003/04 to 2017/18.

The 'standard' definition of income poverty used in most empirical studies is based on a threshold of 50 per cent of median equivalised income. Based on income after housing costs, this translates to a poverty line $473.58 for a single person, with poverty lines for other family types based on multiples of this reference line using the OECD modified equivalence scale.

Table 21 shows the estimated incidence of poverty in Western Australia and nationally from 2003/04 to 2017/18, uprated to May 2020 to match current prices and incomes. Poverty rates are presented for all people, and separately for adults, children and specifically for children under 5.

We estimate that 12.9% of people in Western Australia live in households with incomes below half the national median once housing costs are deducted. This compares to a headline poverty rate of 13.5% nationally, equivalent to just over 3.2 million Australians in 2017-18 (Table 22).

The overall poverty rate among children of any age in Western Australia is 14.9%, which translates to 94,000 West Australian children living in families in poverty (Table 22). The national child poverty rate is 16.4%, with nearly one million children across Australia (965,000) living in poverty.

However, the picture for youngest children is more concerning.

More than one in five children under 5 in Western Australia (20.7%) are living in families in poverty, equivalent to 33,000 young children. This compares to a national poverty rate of 19.6% for children under 5 in Australia, representing 285,500 children across Australia.

The overall poverty rate among children of any age in Western Australia is 14.9%, the equivalent of 94,000 children living in families in poverty.

The national child poverty rate is 16.4%.

Nearly one million children across Australia (965,000) are living in poverty.

More than one in five children under 5 in Western Australia (20.7%) are living in families in poverty, which translates to 33,000 young children.

The national rate of poverty for children under 5 in Australia is 19.6%, equivalent to 285,500 children.

The rate of poverty among WA's children under 5 has risen by 4.9ppt over the last decade, from 15.8% in 2011.

National child poverty rates rose for the first time in a decade in 2017/18, having fallen consistently over the ten years from 2007 to 2016.

TABLE 22

Child and adult poverty counts, WA and Australia: 2003-04 to 2017-18

WESTERN AUSTRALIA - Relative poverty rates (%) Assessed at 50 per cent of median equivalised AHC income								
	2003/04	2005/06	2007/08	2009/10	2011/12	2013/14	2015/16	2017/18
Adults	137,600	157,900	181,500	195,900	187,500	164,200	219,300	222,400
Children	56,000	50,900	67,600	84,300	67,800	73,800	99,300	94,000
Children under 5	22,700	15,000	25,900	25,800	23,300	25,400	35,300	33,000
People	193,600	208,800	249,100	280,200	255,300	238,000	318,600	316,400

AUSTRALIA - Relative poverty rates (%) Assessed at 50 per cent of median equivalised AHC income								
	2003/04	2005/06	2007/08	2009/10	2011/12	2013/14	2015/16	2017/18
Adults	1,569,300	1,702,700	2,088,400	1,957,700	2,078,200	2,098,900	2,028,700	2,268,900
Children	620,600	716,500	877,600	864,800	829,800	851,400	865,700	965,000
Children under 5	204,200	189,400	273,100	272,600	259,900	258,900	256,700	285,500
People	2,189,900	2,419,200	2,966,000	2,822,500	2,907,900	2,950,300	2,894,400	3,233,900

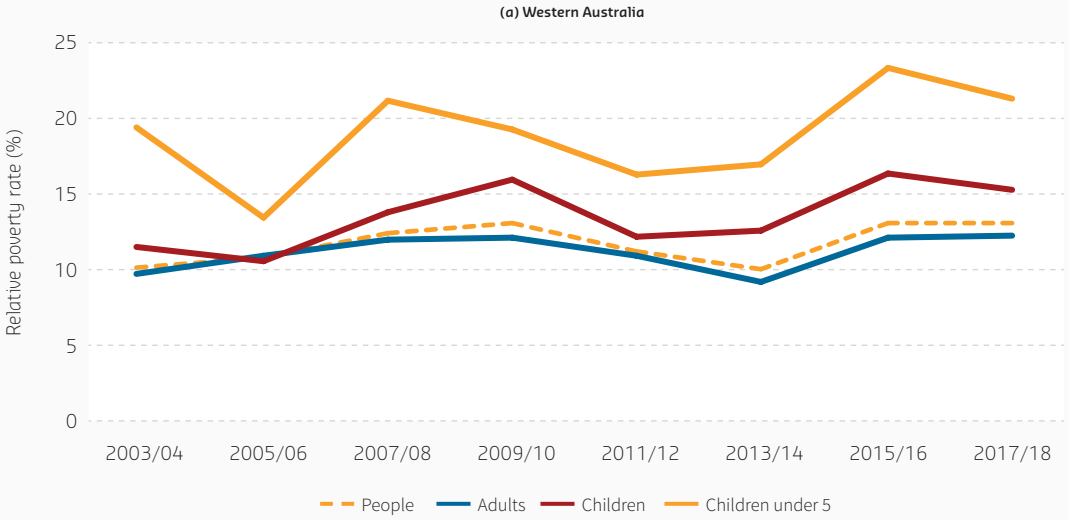
Notes: Relative poverty rates and poverty counts are based, respectively, on the share and number of adults and children who live in households with incomes below 50 per cent of the median equivalised income after housing costs (AHC), including mortgage, rent and utilities costs. The OECD modified equivalence scale is used in poverty calculations for the comparison of incomes across households of different sizes.
Source: Bankwest Curtin Economics Centre | Authors' calculations from the ABS Survey of Income and Housing (SIH), 2003/04 to 2017/18.

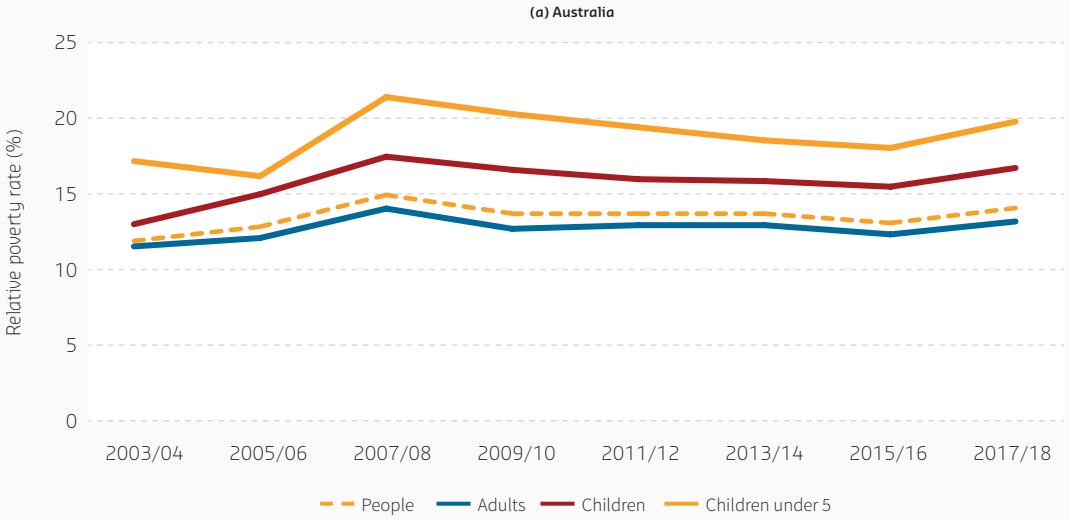
The comparative poverty rates for adults and children over time are shown in Figure 25, and reveal that poverty among children under 5 has been systematically higher than adult poverty over at least the last two decades both in Western Australia (panel a) and Australia (panel b). The rate of poverty among WA's children under 5 has risen by 4.9ppt over the last decade, from 15.8% in 2011.

National child poverty rates rose for the first time in a decade in 2017/18, having fallen consistently over the ten years from 2007 to 2016. For Western Australia on the other hand, the rate of child declined over the latest two years of SIH data.

FIGURE 43

Relative poverty rates in Western Australia and Australia: 2003-04 to 2017-18





Note: As for Table 21.

Source: Bankwest Curtin Economics Centre | Authors' calculations from the ABS Survey of Income and Housing (SIH).

Child care costs contribute to the incidence of poverty among families with children. The child poverty rate among children under 5 rises by 0.6 percentage points to 20.2% when out-of-pocket childcare costs are accounted for.

Child care costs contribute to the incidence of poverty among families with children. To show this, we recalculate poverty rates after subtracting child care costs alongside housing costs as a necessary expenditure.

The child poverty rate among children under 5 rises by **0.6 percentage points** to 21.5% in Western Australia and 20.2% nationally when out-of-pocket childcare costs are accounted for, as shown by the hashed schedules in Figure 25.

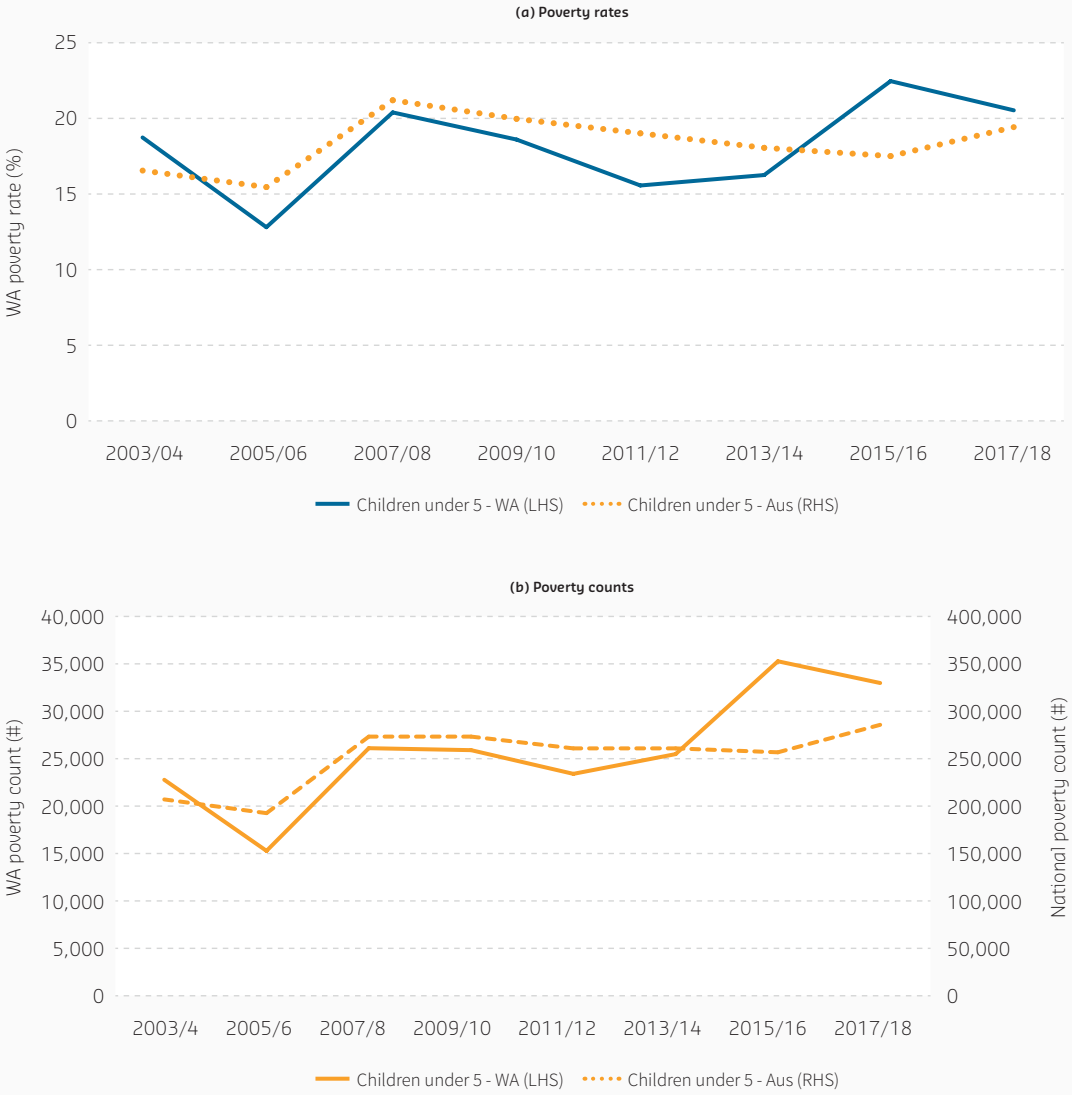
This result is driven by average out-of-pocket costs of child care that remain high, at between 40% and 45% of gross child care costs for families with young children who use either long day care, or a combination of before- and after-school care and long day care. In dollar terms, the average out-of-pocket childcare cost *net of child care subsidies* still reaches $160 per week for families using a combination of before- and after-school care and long day care.

This is an important result, highlighting the additional cost pressures faced by families with young children even taking account of childcare subsidies that only part compensate families for the costs of childcare. These findings emphasise how policies to support child care costs need to be kept under close review, to ensure that the support packages keep pace with rising costs, and do not unduly disadvantage families with young children.

The trajectories of poverty rates and poverty counts for children under 5 in WA and Australia are directly compared in Figure 44, using the 50 per cent median definition of poverty. The poverty rate for children under 5 in Western Australia (panel a) has generally sat close to the national rate, with 2015/16 as an exception. Taking population growth into account, the number of children under 5 in poverty for Western Australia (panel b) rose between 2011/12 and 2015/16, but has reversed on latest figures.

FIGURE 44

Poverty rates and counts among children under 5 in WA and Australia: 2003-04 to 2017-18

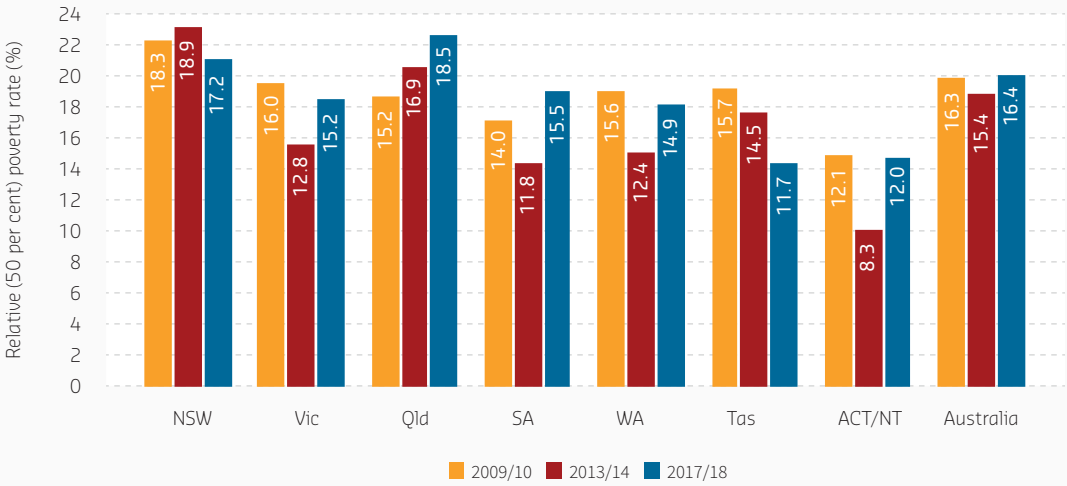


Note: Poverty counts for WA and Australia are compared by setting the two count schedules on separate scales.
Source: Bankwest Curtin Economics Centre | Authors' calculations from the ABS Survey of Income and Housing (SIH), 2003/04 to 2017/18.

WA now ranks fifth in the overall rate of child poverty, at 14.9%, behind Queensland (18.5%), New South Wales (17.2%), South Australia (15.5%) and Victoria (15.2%).

FIGURE 45

Poverty among children, by state and territory: 2009-10 to 2017-18

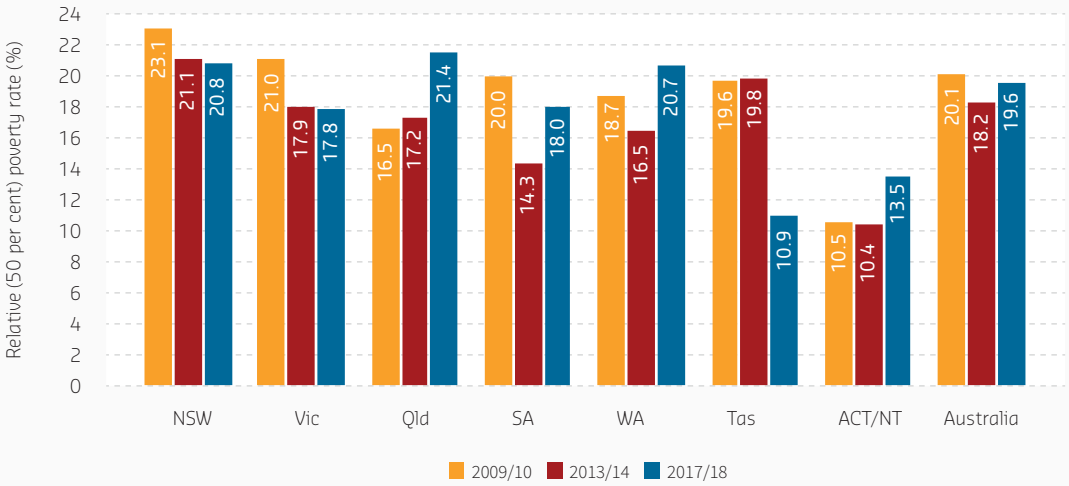


Note: Relative poverty rates are based on the share of children who live in households with incomes below 50 per cent of the median equivalised income after housing costs (AHC).
Source: Bankwest Curtin Economics Centre | Authors' calculations from the ABS Survey of Income and Housing (SIH).

Comparing across state and territory jurisdictions (Figure 45), Queensland records the highest child poverty rate at 18.5% - increasing by 3.3ppt over the last decade. WA ranks fifth in the overall rate of child poverty, at 14.9%, behind Queensland (18.5%), New South Wales (17.2%), South Australia (15.5%) and Victoria (15.2%).

FIGURE 46

Poverty among children under 5, by state and territory: 2009-10 to 2017-18



Note: Relative poverty rates are based on the share of children under 5 who live in households with incomes below 50 per cent of the median equivalised income after housing costs (AHC).
Source: Bankwest Curtin Economics Centre | Authors' calculations from the ABS Survey of Income and Housing (SIH).

However, Western Australia faces more of a challenge with poverty among young children, compared to other jurisdictions. Figure 46 shows WA to rank third in the rate of poverty among children under 5, sitting behind Queensland (21.4%) and New South Wales (20.8%).

WA faces more of a challenge with poverty among young children compared to other states.

HOW DEEP IS CHILD POVERTY?

This report looks to explore the incidence of severe child poverty, by modelling the share of children who live in families with less than 30 per cent of median income.

Severe financial hardship has a material bearing on the developmental outcomes and wellbeing of a most vulnerable cohort of young children.

Many people are forced to live in substantially greater and more severe depths of poverty than captured by the 'standard' poverty threshold of 50 per cent of median equivalised income. For this reason, it's imperative that we gain a better understanding of the incidence of severe poverty among families with young children, and the situation of those facing the most adverse financial hardship.

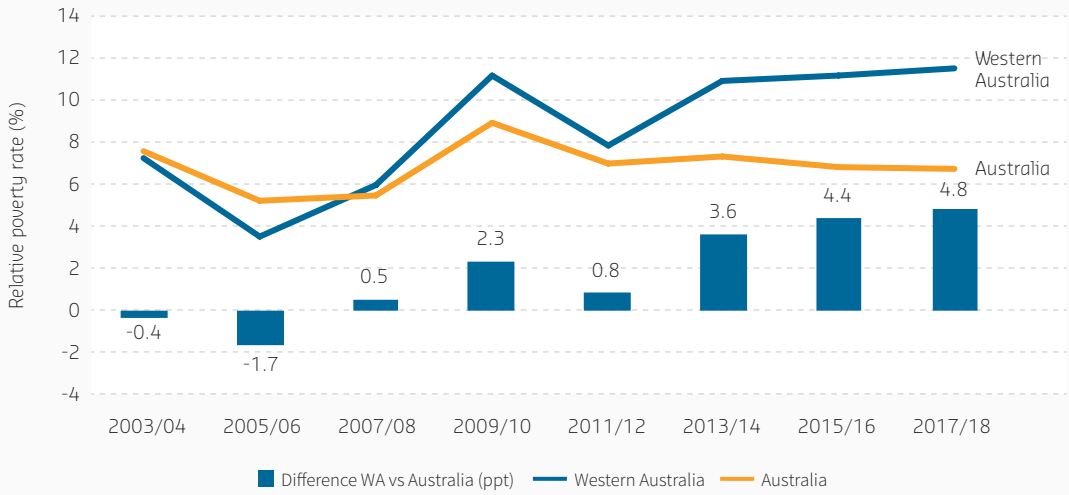
This report looks to explore the incidence of severe child poverty, by modelling the share of children who live in families with less than 30 per cent of median income. Setting the threshold for severe poverty at 30 per cent of median income translates into a severe poverty line of $284.16 for a single person, and $370 for a single parent with a young child.

Nationally, more than 975,000 adults and 374,000 children are living in severe poverty, including nearly 100,000 children under 5.

The rate of severe poverty among children under 5 in Western Australia has risen to 11.4%, compared to a national rate of 6.7% (Figure 47). In fact, this gap in severe poverty among children under 5 has widened consistently between WA and Australia over the last decade, with the rising trend for WA contrasting with a gradual decline in the national rate.

FIGURE 47

Rates of severe (30 per cent median) poverty among children under 5, WA and Australia



Note: Relative poverty rates are based on the share of children living in households with incomes below 30 per cent of the median equivalised income after housing costs (AHC).
Source: Bankwest Curtin Economics Centre | Authors' calculations from the ABS Survey of Income and Housing (SIH).

The gap in severe poverty among children under 5 has widened consistently between WA and Australia over the last decade, with the rising trend for WA contrasting with a gradual decline in the national rate (Table 23). These difference have arisen most since 2011, with the percentage point gap in severe poverty among children under 5 growing from 0.8 percentage points in 2011/12 to 4.8 percentage points using the latest available data.

The rate of severe poverty among children under 5 in Western Australia has risen to 11.4% in 2017/18, compared to a national rate of 6.7%

More than 975,000 adults and 374,000 children in Australia are now living in severe poverty, including nearly 100,000 children under 5.

TABLE 23

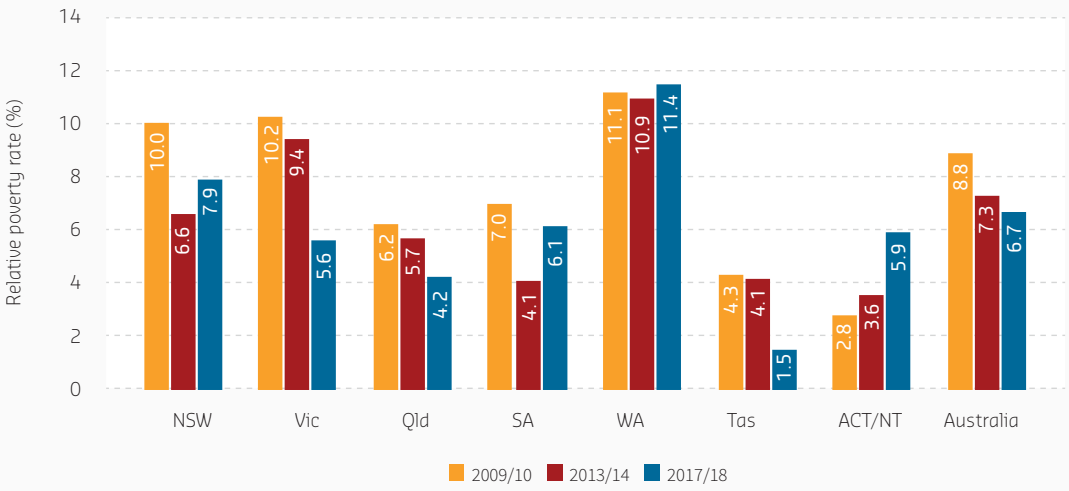
Comparing severe child poverty, WA versus Australia: 2003-04 to 2017-18

	Comparison of rates of severe child poverty: WA versus AUSTRALIA Assessed at 30 per cent of median equivalised AHC income							
	2003/04	2005/06	2007/08	2009/10	2011/12	2013/14	2015/16	2017/18
Children under 5								
Western Australia	7.2	3.4	5.9	11.1	7.8	10.9	11.1	11.4
Australia	7.5	5.1	5.4	8.8	6.9	7.3	6.8	6.7
Difference WA vs Aus (ppt)	-0.4	-1.7	+0.5	+2.3	+0.8	+3.6	+4.4	+4.8
Children								
Western Australia	3.3	4.1	4.3	7.4	5.5	6.7	8.5	7.5
Australia	5.2	4.9	5.1	6.4	6.3	6.2	5.7	6.3
Difference WA vs Aus (ppt)	-1.9	-0.8	-0.8	+1.0	-0.7	+0.4	+2.8	+1.2

Notes: Relative poverty rates are based on the share of children who live in households with incomes below 30 per cent of the median equivalised income after housing costs (AHC).
Source: Bankwest Curtin Economics Centre | Authors' calculations from the ABS Survey of Income and Housing (SIH).

FIGURE 48

Rates of severe poverty among children under 5, by state and territory



Note: A Relative poverty rates are based, respectively, the share and number of adults and children who live in households with incomes below 30 per cent of the median equivalised income after housing costs (AHC)
Source: Bankwest Curtin Economics Centre | Authors' calculations from the ABS Survey of Income and Housing (SIH).

With a rate of 11.4%, severe poverty among children under 5 is considerably higher in Western Australia than in Australia's other states and territories.

Children aged under 5 in Western Australia are 1.7 times more likely to be in severe poverty than indicated by their population share.

The rates of severe child poverty vary substantially across states and territories jurisdictions, driven by differences in housing costs, employment and earnings opportunities, demographic differentials and costs of living – including childcare costs – as well as household incomes.

Severe poverty among children under 5 is considerably higher in Western Australia than in Australia's other states and territories, at a rate of 11.4% (Figure 48). New South Wales ranks second, at 7.9%, followed by South Australia at 6.1%.

The over- and underrepresentation of young children in poverty, and in severe poverty, across states and territories is presented in Table 24. For Western Australia, the rate of child poverty assessed against 50 per cent of median income (panel i) has been broadly at or below the rate expected for the young child population size in most years, with 2015/6 being the sole recent exception.

However, the picture is somewhat different when we focus on the over- and underrepresentation of young children in severe poverty (panel ii). Western Australia rates poorest compared to other jurisdictions on this measure, with 1.72 times the expected number of young children in severe poverty relative to population size – a substantial growth from 1.12 in 2011/12.

TABLE 24

Over/under-representation of children living in families in poverty: by state/territory

	OVER/UNDER-REPRESENTATION of children under 5 in poverty/severe poverty relative to population share (0.5 = half the share, 2.0 = twice the share)							
	(i) 50 per cent median poverty							
State/territory	2003/04	2005/06	2007/08	2009/10	2011/12	2013/14	2015/16	2017/18
NSW	1.15	1.11	1.08	1.15	1.07	1.16	0.98	1.06
Vic	0.97	1.10	0.96	1.05	0.98	0.98	1.07	0.91
QLD	0.90	0.87	1.06	0.82	1.10	0.95	0.85	1.10
SA	0.65	0.96	0.84	0.99	0.75	0.78	1.02	0.92
WA	**1.13**	**0.84**	**0.96**	**0.93**	**0.83**	**0.90**	**1.27**	**1.06**
Tas	0.85	0.81	0.72	0.97	1.36	1.09	1.02	0.56
ACT/NT	0.66	0.56	0.78	0.52	0.62	0.57	0.62	0.69
	(ii) Severe (30 per cent median) poverty							
State/territory	2003/04	2005/06	2007/08	2009/10	2011/12	2013/14	2015/16	2017/18
NSW	1.15	1.13	1.33	1.13	0.95	0.90	0.76	1.19
Vic	1.05	1.13	0.93	1.16	1.03	1.29	1.17	0.84
QLD	0.95	0.90	0.81	0.70	1.17	0.78	0.81	0.63
SA	0.60	0.74	0.47	0.79	0.56	0.57	1.31	0.92
WA	**0.95**	**0.67**	**1.09**	**1.26**	**1.12**	**1.49**	**1.65**	**1.72**
Tas	0.44	1.31	0.55	0.49	0.99	0.57	0.67	0.23
ACT/NT	0.74	0.52	0.65	0.32	0.60	0.49	0.67	0.89

Notes: Relative poverty rates are based on the share of children living in households with incomes, respectively, below 50 per cent and 30 per cent of the median equivalised income after housing costs (AHC), including mortgage, rent and utilities costs. The OECD modified equivalence scale is used in poverty calculations for the comparison of incomes across households of different sizes.
Source: Bankwest Curtin Economics Centre | Authors' calculations from the ABS Survey of Income and Housing (SIH).

SUMMARY

The findings in this chapter provide important evidence of the degree of financial hardship faced by families of Australia's youngest cohorts. The key message from the analysis in this Focus on WA report is that child poverty should be an issue of genuine concern to governments and policy agencies both in Western Australia and at a Federal level, with nearly one million children nationally living in poverty.

In Western Australia, the poverty rate among children under 5 has risen by 4.9ppt over the last decade from 15.8% in 2011 to 20.7% on the most recent measure. And severe child poverty presents more strongly in Western Australia than in any other jurisdiction, with 11.4% of children under 5 living in families who have to survive on less than 30 per cent of median income once housing costs are taken care of.

The situation facing financially vulnerable families and children every day in Australia can be brought into sharper relief by relating severe poverty to a real situation.

A single parent with one young child in severe (30 per cent) poverty has to live on less than $370 per week. This translates to $50 a day to meet essential living costs, and to cater for unforeseen circumstances or adverse health situations for her or her child.

With out-of-pocket child care costs at an average of $160 per week, even taking account of child care subsidies, this emphasises the extent of the financial pressures faced by many families in the most difficult financial circumstances.

The growth in child poverty in Western Australia looks to have been driven by a combination of high housing costs, greater costs of child care and falling real after-housing-costs income, and again raises the question of adequacy of financial support through Parenting Payment, Family Tax Benefit and Newstart, as well as the Child Care Subsidy, as a protection for the poor living standards experienced by too many families with young children - one of our most vulnerable cohorts.

In Western Australia, the poverty rate among children under 5 has risen by 4.9ppt over the last decade from 15.8% in 2011 to 20.7% on the most recent measure.

"A SINGLE PARENT WITH ONE YOUNG CHILD IN SEVERE (30 PER CENT) POVERTY HAS TO LIVE ON LESS THAN $370 PER WEEK AFTER TAKING CARE OF HOUSING COSTS."

CHILD PROTECTION

Around thirty (29.7) in every 1,000 children aged 4 years and under in WA were subject to child protection services in 2018-19.

At 30 June 2019, 7.2 per 1,000 children aged 4 and under in WA were in out-of-home care, up from 5.1 per thousand in 2009-10, and higher than the national rate of 6.5 per thousand.

INTRODUCTION

While parents and families have primary responsibility for the care and wellbeing of their children, in circumstances where children are experiencing abuse or neglect, or are at risk of abuse or neglect, there is some expectation governments will intervene to safeguard those children. Policy frameworks for child protection involve processes for identification and verification of children at risk and interventions to support families and reduce risks to the child, including removal of the child from their family into state care if necessary. Child protection systems vary considerably across jurisdictions in the way these functions are carried out, the overall level of resources provided and the emphases placed on different components of the framework. Inevitably, there are difficult trade-offs at all levels of policy, perhaps most fundamentally between the principle that removal should be a last resort, against the need to minimise the risk of harm to the child.

The Department of Communities has carriage of the child protection framework in WA, which is governed by the Children and Community Services Act 2004.

The vast majority of young children in WA enjoy a safe and loving home environment. Around thirty (29.7) in every 1,000 children aged 4 years and under in WA were subject to child protection services in 2018-19, more than double the rate of 14 per thousand in 2013-14, and marginally below the current national rate of 30.9 per thousand. At 30 June 2019, 7.2 per 1,000 children aged 4 and under in WA were in out-of-home care, up from 5.1 per thousand in 2009-10, and higher than the national rate of 6.5 per thousand.[10] The rate at which Indigenous children are placed in out-of-home care in Western Australia is among the highest in the world, and is 18 times the rate for non-Indigenous children. This chapter looks at issues for the child protection system in this state, with a focus on the disparities between the placement of Indigenous and non-Indigenous children into out-of-home care.

[10] Authors' calculations from AIHW 2020 Tables S2.3 and S5.5 and AIHW 2015 Tables 2.3, A3 and S1.

INTERNATIONAL TRENDS IN CHILD PROTECTION

Australia and other comparable welfare states are confronted by a trend of increasing child protection notifications, investigations, interventions and removals, with both increasing demand for and increasing costs of tertiary services[11] (Nett and Spratt 2012, Harrison *et.al*. 2014, valentine and Katz 2015, Bilson *et.al.* 2015). Unfortunately, as the cost of these crisis and intensive support services has risen, states with constrained budgets have invested proportionately less in prevention and early intervention activities, such as family support services (Harries *et.al* 2014). This is particularly true of Western Australia, where a greater proportion of our services are managed by the state and less is spent on community based support and assistance to reduce the need for statutory interventions and child removal (AIHW 2020, Productivity Commission 2020). This can create a vicious circle of rising costs and falling outcomes.

Child protection decision making in Anglophone welfare states (such as the UK, USA, Canada, Australia and New Zealand) is directed by statutory systems with a risk management focus and a 'child protection orientation' that is characterised by an emphasis on reducing the risk of child harm through forensic and legalistic statutory systems and interventionist services (Gilbert *et.al.* 2012, Lonne *et.al.* 2013, Churchill and Fawcett 2016, Bilson *et.al.* 2015, 2016). This contrasts with the 'family service orientation' in Scandinavian and western European nations, with lower levels of child poverty, access to universal parenting support and early child development services, and which ultimately have much lower rates of child harm, hospitalisation and death (Nett and Spratt 2012).

The factors behind the development of these very different approaches to parent support and child protection are both political and cultural. They include rising awareness and changing cultural standards towards child maltreatment, high profile inquiries into extreme cases of child abuse, and the implementation of risk adverse policies focused on preventing highly disturbing but relatively low frequency events. The US, UK, Canada and Australia all saw a rapid escalation in child protection notifications, assessments and interventions during the Eighties and Nineties (Bilson *et.al.* 2015, Harries *et.al.* 2014). The political and media discourse at the time was driven by a crisis response mentality and focused on severe cases of abuse within a narrative of blame and systemic failure. This inevitably led to increased responsiveness and the extension of mandatory reporting policies. A focus on operational definitions of child abuse and administrative assessment of risk within a forensic model has led to problems of diagnostic inflation (Harrison *et.al.* 2014, Harries *et.al.* 2014) and tended over time to move resources away from prevention-based programs towards more complex forensic systems, despite the lack of evidence of their efficacy (Gilbert *et.al*. 2012). The end result has been rising numbers in the statutory system, rising cost of care, rising demand and comparatively poor life outcomes for young people leaving care (including poverty, unemployment, homelessness, teen pregnancy, suicide and incarceration rates) (Doolan *et.al.* 2013, Mendes 2007, Mendes *et.al.* 2011, Moslehuddin 2012, Malvaso *et.al.* 2017).

In response to rising costs, these countries sought in the late 90's and early 2000's to implement more effective systems of risk assessment to enable them to respond more discerningly to those reports of child maltreatment that indicated the highest levels of risk. 'Differential response' strategies were developed that sought to better filter notifications and to divert families with lower levels of risk to intensive family support programs (Harris and Hackett 2007, Hughes *et.al.* 2013, Harries *et.al.* 2014, Jones 2015). Unfortunately, those services were often under-resourced and hence not necessarily effective or even available, while at the same time those referred were now within the system, designated as at risk, and subject to higher levels of scrutiny.

Australia and other welfare states are confronted by a trend of increasing child protection notifications, investigations, interventions and removals, with both increasing demand for and increasing costs of tertiary services.

11 'Tertiary services' refers to children in the formal child protection system and subject to statutory interventions, this includes protective orders and out-of-home care (see definitions AIHW 2020, p3-4).

CHILD PROTECTION TRENDS IN WESTERN AUSTRALIA

WA invests less per capita or per child in child protection and family support services overall, and the vast majority of this is at the tertiary end (AIHW 2020, PC 2020),

Western Australia experienced a similar trend of escalating notifications and interventions through the 1980's leading to adoption of a differential response model labelled *'New Directions'* in 1996 (Family and Children Services 1996, Parton & Mathews 2001). This model sought to separate serious allegations of child maltreatment ('notifications' requiring a forensic investigation) from general concerns about child and family welfare ('reports' requiring family-focused support services). This led WA to have comparatively lower *notification* rates than other states, without any decrease in substantiated abuse or physical harm (Bilson *et.al* 2015, Harries *et.al* 2014). Arguably a significant impact of this process was to raise the threshold at which children were considered to be part of the formal child protection system, but in the absence of significant resources invested into effective services for those diverted from the system, it failed to reduce the longer-term growth in the numbers and cost of children in care. The establishment of the *Children and Community Services Act* in 2004 (the Act) formalised screening processes and criteria, while the introduction of mandatory reporting in 2009 led to further growth in notification and investigation rates. The Objects of the Act are:

a. to promote the wellbeing of children, other individuals, families and communities;

b. to acknowledge the primary role of parents, families and communities in safeguarding and promoting the wellbeing of children;

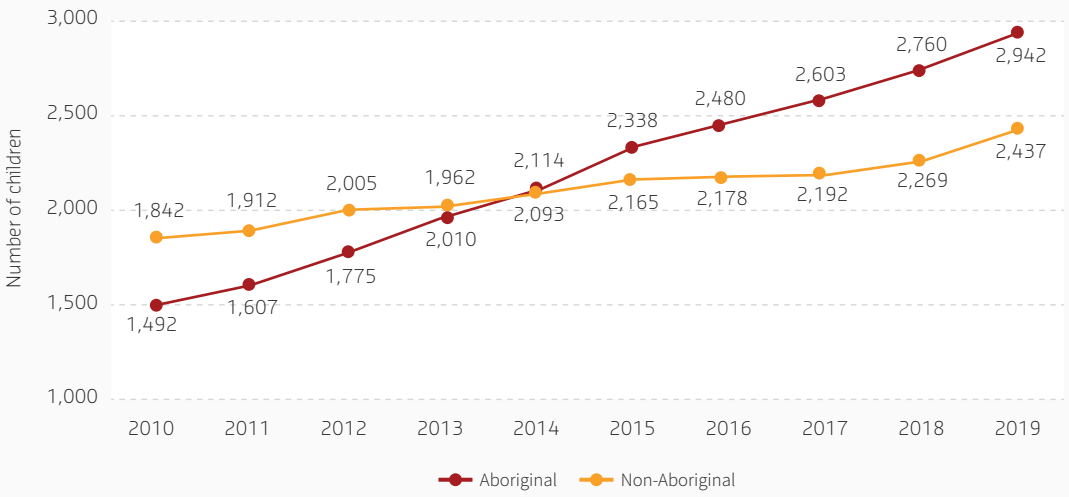
c. to encourage and support parents, families and communities in carrying out that role;

d. to provide for the protection and care of children in circumstances where their parents have not given, or are unlikely or unable to give, that protection and care;

However, the vast majority of services and resources then and now remain focused on the fourth Object, and comparatively few resources are directed towards family support or early intervention services to assist families and meet the first three Objects. WA invests less per capita or per child in child protection and family support services overall, and the vast majority of this is at the tertiary end (AIHW 2020, PC 2020), with the number of children in care continuing to grow as shown in Figure 49.

FIGURE 49

Children aged 0-17 years in Out-of-Home Care in WA, 2010 to 2019



Source: Bankwest Curtin Economics Centre | taken from Out-of-home care factsheet, WA Department for Communities (2019).

According to the Productivity Commission analysis, WA spends only 5.6% of its child protection budget on family support and intensive family support services, compared to a national average of 18.9% their data shows WA spends less overall, at $878 per child (compared to $1160 per child nationally), and only $47 of that is on family support and intensive family support services (compared to $185 per child nationally). The Department of Communities 2018-19 Annual Report states $85.6m was spend in 2019 on earlier intervention and family support services, $299m on care arrangements, $108m on care support and $89m on assessments and investigations, indicating 17.8% of listed service funding was spend on family support (DoCs 2020).

The problem of growing demand and rising costs is likely to be compounded by the need to respond to the findings of the *Royal Commission into Institutional Responses to Child Sexual Abuse.* The recommendations of the Commission should drive a greater level of trauma-informed practice within child protection and out-of-home care services (and other institutions and services where children are at risk), requiring more qualified staff, greater levels of oversight and care (Benton *et.al.* 2017, RCIRCSA 2018, JSCCCYP 2020).

Aboriginal infants are over-represented in the child protection system in Australia (Harrison *et.al.* 2015). Research by the Telethon Kids Institute has raised concern at a rising trend of infant removals. O'Donnell *et.al.* 2019 found that the number of Aboriginal infants (those under one year old) taken into care nationally increased 17% between 2013 and 2016. In Western Australia, linked data indicates that teenage mothers, mothers with a mental health or substance-related contact, those living in disadvantaged or regional and remote communities, and children with a disability were more likely to be taken into care. Aboriginal families scored highly on all of these risk factors. While Aboriginal infants were nine times more likely to be taken into care overall, once other risk factors were taken into account, they were still twice as likely to be removed.

The Department of Communities 2018-19 Annual Report states $85.6m was spend in 2019 on earlier intervention and family support services, $299m on care arrangements, $108m on care support and $89m on assessments and investigations, indicating 17.8% of listed service funding was spend on family support (DoCs 2020).

THE PROBLEM OF OVER-REPRESENTATION

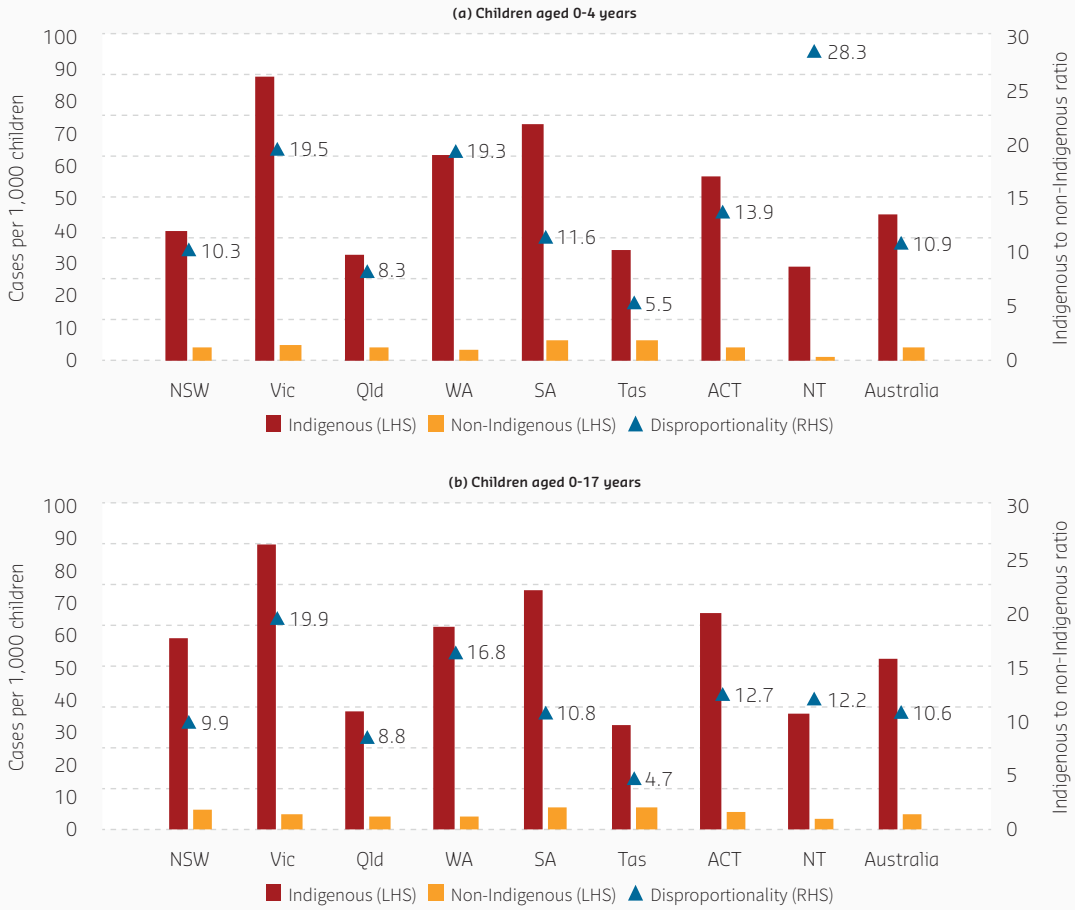
As at June 2019, 64 in every 1,000 Indigenous children aged 0-17 years in WA were in out-of-home care, compared to 3.8 for non-Indigenous children, giving an Indigenous over-representation rate of 16.8 compared to 10.6 for Australia as a whole.

Aboriginal children currently represent 58% of young children in out-of-home care in WA, despite being only 6.7% of their age cohort.

Aboriginal children and families appear disproportionately at each stage of the child protection system in Western Australia, with their over-representation rate increasing at each step. Western Australia continues to have one of the highest over-representation rates in the country for out-of-home care, and its national rate is arguably the highest in the world. As at June 2019, 64 in every 1,000 Indigenous children aged 0-17 years in WA were in out-of-home care, compared to 3.8 for non-Indigenous children, giving an Indigenous over-representation rate of 16.8 compared to 10.6 for Australia as a whole. Alarmingly, these rates of out-of-home care in WA are very similar for children aged 0-4, with the State's over-representation rate for this subset of children, at 19.3, second only to Victoria (19.5) among the states and well above the national rate of 10.9 (Figure 50). Aboriginal children currently represent 58% of young children in out-of-home care in WA, despite being only 6.7% of their age cohort.[12]

FIGURE 50

Children in out-of-home care, Indigenous and non-Indigenous rates per 1,000 children, 30 June, 2019



Source: Bankwest Curtin Economics Centre | Authors' calculations based on AIHW 2020 Tables S5.5 and P4.

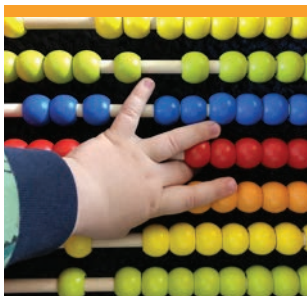
12 Authors' calculations from AIHW 2020 Tables S5.5 and P4. The high over-representation rate for 0-4 year olds for the NT is due to what appears to be an anomalously low rate for non-Indigenous children in 2019.

By comparison, the over-representation rate of First Nations children in Canada is 4.2 times higher at the investigation level and 12.4 times for placement into care (Sinha *et.al.* 2011), whereas the rate for Native American children within the United States is 5.5 times for notification and 3.5 times for placement into care, while notification for African American children is 3.0 times and placement 2.3 times higher (Boyd 2014, CWIG 2016).

There is strong international evidence to suggest that children from ethnic minority groups fare worse in risk-adverse proceduralist systems with a child rescue ethic. Over-representation matters to those concerned with the efficiency of child protection services and legitimacy of governance systems because it highlights the disparity in outcomes for the children of marginalised groups within our societies (Mendez 2007, Mendez *et.al*. 2011, Moslehuddin 2012l). Over-representation matters in Australia because it is unjust and expensive, because it drives poorer life, health and wellbeing outcomes, and because its extent, impact and communal cost continues to grow.

International research highlights a number of competing explanations for the over-representation of First Nations children in child protection systems, including: higher rates of poverty and social exclusion; unrecognised systemic racism; cultural differences in child-rearing practices and extended family responsibilities; lack of cultural awareness of mandated reporters and welfare professionals; the impacts of inter-generational trauma associated with previous child removal policies; the lack of exposure to child-rearing skills of those reared in institutional settings; parents and carers who were themselves the victims of physical, emotional and sexual abuse while in institutional or state care; learned helplessness and distrust of authority; and higher overall rates of poor mental health, alcohol and other drug misuse, often comorbid with other factors, particularly trauma (Blackstock 2009, Tilbury 2009, Douglas and Walsh 2013, Sinha *et.al.* 2013, Trocme *et.al.* 2001, 2005, 2010, Maclean et.al. 2015, 2017, Hafekost *et.al*. 2017). A key research question is the degree to which the disparate child protection outcomes of First Nations children are simply a matter of extent (that is, they experience the same risk factors, albeit their needs may be more acute, multiple or complex), versus a difference in *kind* (that is, they experience additional risk factors that change the nature of the needs or risks they face).

International comparisons suggest that, while children from ethnic minorities consistently appear disproportionately in child protection systems, the extent of this over-representation varies, as does the extent to which this occurs as a result of disproportionate need (driven largely by poverty and structural disadvantage), higher rates of reporting, or systemic biases in decision making processes. Research into the historic and ongoing impacts experienced by First Nations peoples in settler societies highlights specific factors related to former child removal policies that have clear inter-generational impacts. It should come as no surprise that parents who were raised in institutional settings (e.g. the Stolen Generations and former child migrants), never given the chance to know a parent's love or see good parenting practice in action, then struggle to care for children of their own. Particularly when we consider what we know now about the high rates of physical, sexual and emotional abuse in those institutions and the ongoing impacts of that trauma. Further, children and young people who grow up within the child protection system are at much higher risk of ending up in the juvenile justice system (ALSWA 1995, HREOC 1997, Gordon *et.al.* 2002, Ford 2007, Harries *et.al.* 2014, Malvaso *et.al.* 2017, Senate Community Affairs Committee 2001, 2004, 2009).



Over-representation matters in Australia because it is unjust and expensive, because it drives poorer life, health and wellbeing outcomes, and because its extent, impact and communal cost continues to grow.

POVERTY, LOCATIONAL DISADVANTAGE AND NEGLECT

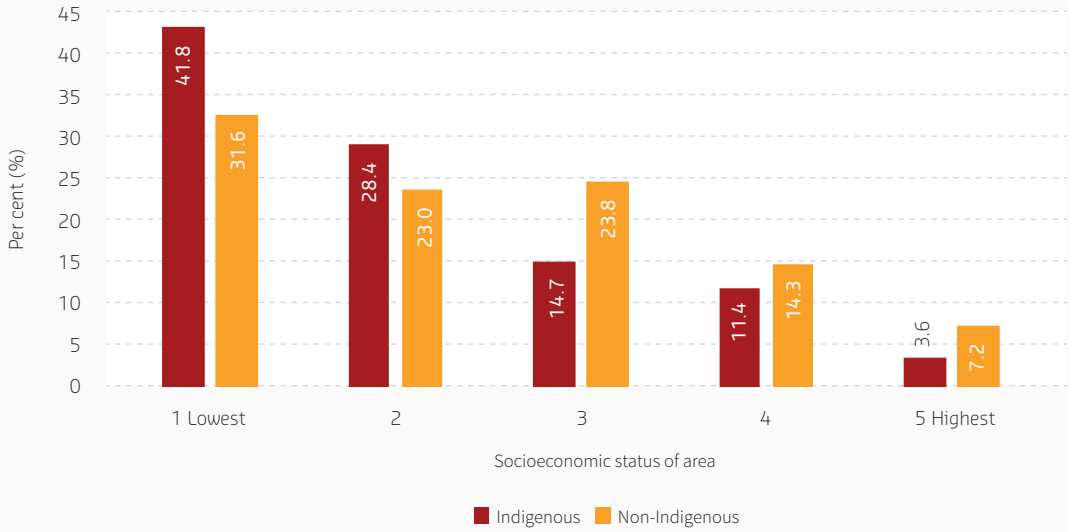
The focus on the individual responsibility of the parent(s) or carers within risk adverse child protection systems ignores the wider social determinants of poverty and deprivation, the inadequacy of income support and problems across social welfare systems.

The fact that children from disadvantaged backgrounds are consistently over-represented across child protection systems raises some important questions. To what extent is poverty a direct or indirect cause? Neglect is defined as "... any serious act or omission by a person having the care of a child that, within the bounds of cultural tradition, constitutes a failure to provide conditions that are essential for the healthy physical and emotional development of a child (AIHW 2019)." Hence poverty can directly cause neglect because parents simply are not able to provide appropriate food, shelter and other critical resources. Poverty can also indirectly contribute to neglect, as hardship and financial stress can become drivers of poor mental health and family conflict. Poverty and locational disadvantage can also mean a lack of access to services and supports needed for healthy child development, make it harder to get children to school or participate in other activities. Poverty can lead to a lack of stable and appropriate housing, forcing families to move and making it harder to develop and maintain relationships, as children move between day cares and schools, miss classes and lose friends (Doidge et.al. 2017, Bywaters 2015, Bywaters *et.al*. 2014, 2015, 2016, Featherstone et.al. 2017).

There is significant disparity in both household level and structural poverty between Aboriginal and non-Aboriginal populations within Australia, but little if any research to date has sought to quantify the extent to which poverty explains over-representation in Australia. Children and families with low socioeconomic status are over-represented in substantiated neglect or abuse (Figure 51). The focus on the individual responsibility of the parent(s) or carers within risk adverse child protection systems ignores the wider social determinants of poverty and deprivation, the inadequacy of income support and problems across social welfare systems. Aboriginal families are clearly over-represented in the most disadvantaged neighbourhoods nationally (Figure 52) and over-represented in neglect and emotional abuse while under-represented in physical or sexual abuse among substantiated cases in Western Australia (Figure 53).

FIGURE 51

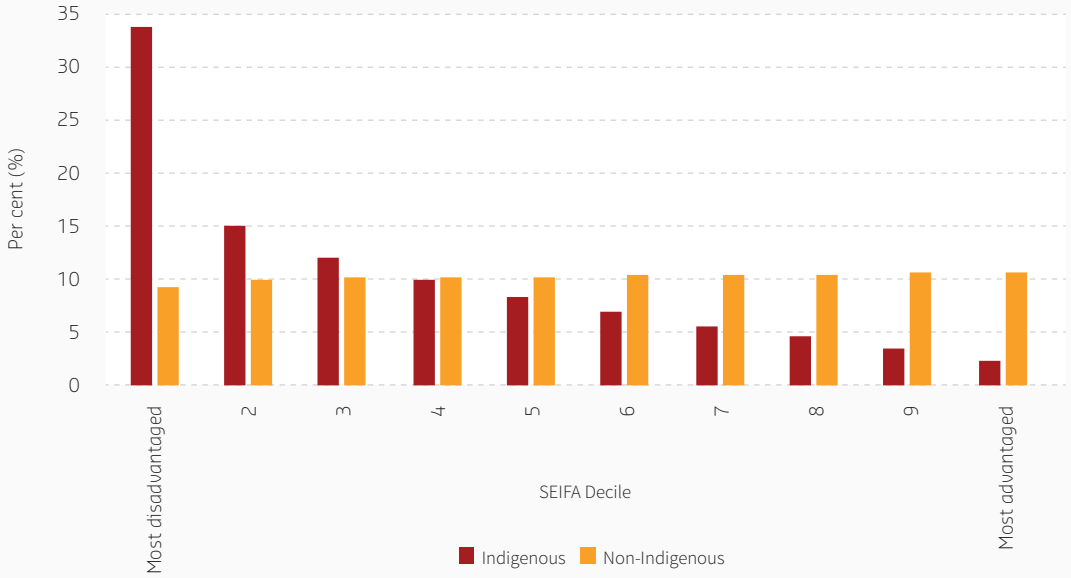
Substantiations, socioeconomic area and Indigenous status, Australian children aged 0-17, 2018-19



Source: Bankwest Curtin Economics Centre | Authors' calculations based on AIHW 2020 Table S3.8.

FIGURE 52

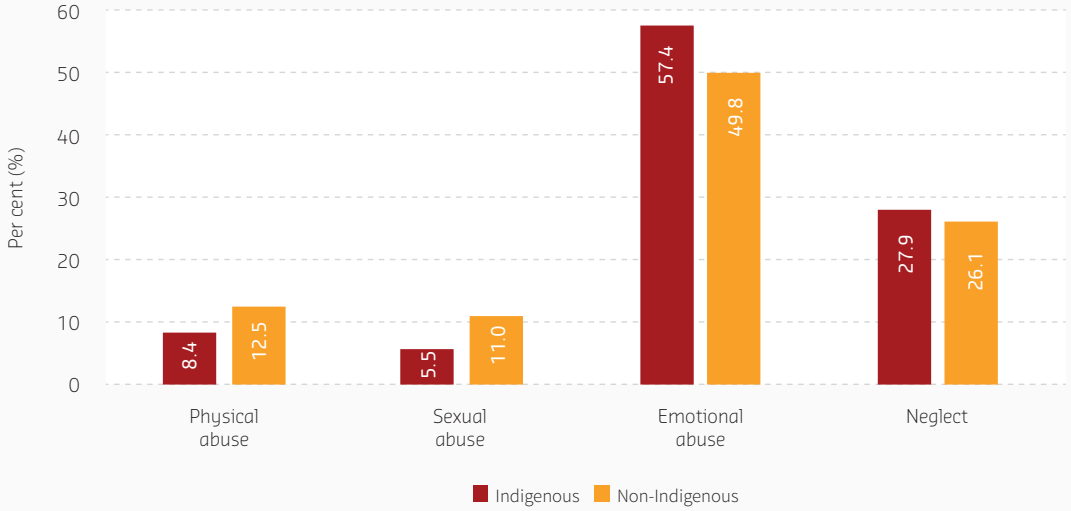
Population distribution by SEIFA decile, Australia 2016



Source: Bankwest Curtin Economics Centre | Authors' calculations based on 2016 ABS Census data.

FIGURE 53

Substantiations by abuse type, children ages 0-17 in Western Australia, 2018-19



Source: Bankwest Curtin Economics Centre | Authors' calculations based on AIHW 2020 Table S3.10.

Evidence comparing child protection risk factors within WA indicates parental mental health, substance use and assault-related hospital admissions together with socioeconomic disadvantage were the strongest risk factors linked to increased risk of substantiation.

Aboriginal women have much higher rates of maternal assault (19% vs 1%), substance use (19% vs 4.6%) and mental health admission (29% vs 12%) than the general population.

A significant body of research on the Canadian child protection system found that First Nations children are over-represented at all stages of the child protection process. Analyses highlight the greater proportion of investigations involving Aboriginal children as the single key agency level predictor of placement decisions (Fallon *et.al.* 2013). Once within the system, the presence of higher child and family risk factors (including poverty, lack of stable housing, younger parents and higher levels of substance use) then account for high rates of substantiation and placement in care, rather than evidence of inherent bias (Trocme *et.al*. 2004, Fluke *et.al.* 2010, Sinha et.al. 2013). However, some racial or cultural bias in decision-making cannot be ruled out. Findings also indicate that child protection agencies with larger First Nations caseloads had less qualified staff and made more placement decisions. These services were also more likely to be in deprived areas, and so poverty, lack of access to services and fewer resources within those child protection agencies to manage their caseloads and less experienced staff all compounded to result in higher removal rates (Fallon *et.al.* 2011, 2013, Chabot *et.al*. 2013).

Evidence comparing child protection risk factors within WA indicates parental mental health, substance use and assault-related hospital admissions together with socioeconomic disadvantage were the strongest risk factors linked to increased risk of substantiation. Children with an intellectual disability and those of younger mothers also faced much higher risk of substantiation. Aboriginal women have much higher rates of maternal assault (19% vs 1%), substance use (19% vs 4.6%) and mental health admission (29% vs 12%) than the general population. These rates are much higher again for those where an allegation has been substantiated (maternal assault 45% vs 11%, substance use 47% vs 27% and mental health admission 57% vs 42%), and the presence of these risk factors was found to make a greater difference for the likelihood of substantiation for Aboriginal mothers (O'Donnell *et.al*. 2010) as is age of child removal (O'Donnell *et.al.* 2016) and maternal incarceration (Dowell *et.al*. 2018). In short, Aboriginal women have much greater risk factors, and the presence of these factors makes a greater difference to the decision to remove a child.

THE IMPACT OF THE STOLEN GENERATIONS

Systematic removal of First Nations children from their families was widespread across colonising nations in the Nineteenth and Twentieth Centuries as part of assimilation policies that sought to suppress and eliminate cultural practices and beliefs. There are strong parallels between the experiences of First Nations children across the former British colonies of Australia, Canada and the United States, shaped by a history of state sponsored removal of First Nations children, institutionalisation and forced assimilation. These are variously referred to as 'residential schools' in Canada, 'boarding schools' in the US, and 'missions' in Australia. As a result, similar problems are documented across First Nations communities, including: intergenerational trauma, social and community dislocation, marginalisation from public services such as health, education, housing and policing, mental health and substance misuse issues, loss of community cohesion and decision-making, high levels of economic deprivation, unemployment, family and domestic violence, developmental vulnerability and delay (HREOC 1997, Milloy 1999, Halverson *et.al.* 2002, Cassidy 2006, Tilbury 2009, Douglas and Walsh 2013, O'Donnell *et.al.* 2010, 2010a, 2016, TRC 2012, Sinha *et.al.* 2013).

In the US it is estimated that approximately 100,000 Native American children were removed from their families between 1869 and 1960 and placed in 332 boarding schools in 29 states. Large numbers of these children died as a result of starvation and disease, often from common ailments due to neglect. Physical, sexual and emotional abuses were rampant. In 1969 the US Senate convened an investigation leading to the *"Indian Education: A National Tragedy a National Challenge report"(aka the Kennedy report)* leading to a series of reforms to increase First Nations participation and control of education and self-governance of tribally controlled lands (Executive Office of the President 2014).[13] As a consequence of this transfer of responsibility and control over the education and child welfare systems in the US to Native American peoples, there has not been the same formal process of inquiry, truth-telling and reparations for those who suffered abuse at the hands of the State, as seen in Canada (the Truth and Reconciliation Commission) and Australian (the Inquiry into the Stolen Generations).

At the peak of the Canadian 'Indian Residential Schools program' in 1931, there were 80 schools operating across Canada, and in all about 150,000 First Nation, Inuit and Metis children, representing around a *third* of all Aboriginal children, were removed from their families and forced into residential schools. Civil litigation was the driving force for recognition and restitution, as from the 1980s on former students launched a series of legal campaigns against the schools, the churches and the state. A turning point occurred in 1990, when First Nations leaders began calls for the churches involved to acknowledge the physical, emotional and sexual abuse suffered by students, and the grand Chief of Manitoba Chiefs disclosed the abuse he suffered at a catholic residential school. *The Royal Commission on Aboriginal Peoples* was established in Canada in 1991, and the Law Commission of Canada was directed to inquire into institutional child abuse, delivering the *Restoring Dignity* report in March 2000. In 2005 the Canadian government announced a compensation package, finalised in 2007 and worth $1.9 billion.

A *Truth and Reconciliation Commission* was established on 1 June 2008 as part of the court-approved Indian Residential Schools Settlement Agreement 2007. A formal public apology was given by the Canadian

13 Noting in 1973 when these programs ceased there were still 60,000 children in off-reservation boarding schools.

Prime Minister on June 11 2008 and the final report of the Truth and Reconciliation Commission, Honouring the Truth, Reconciling the Future was published in December 2015.

The practice of missionary boarding schools in Australia was formalised as official government policy with the appointment of Aborigines Protection Boards and Chief Protectors of Aborigines beginning in the late 1860's (1869 in VIC, 1883 in NSW, 1897 in QLD, 1905 in WA, 1911 in SA). While often the justification of these policies was assimilation into the dominant society, in practice the education provided was not focused on enabling Indigenous children to be equal participants in colonial societies, but rather prepared the boys for menial labour and the girls for domestic servitude. Children were often involuntarily sent out to undertake work and wages were kept by the missions (Jacobs 2006, Booth 2009, Lajimodiere 2014).

There were strong parallels between Canadian residential colleges and Australian missions in terms of the original policies, the levels of abuse and neglect suffered by the children in care, and the political processes of inquiry, apology and reparations. Political ties between First Nations activists and justice groups in Canada and Australia were also a factor in reparations, and following their Royal Commission, Canadian advocates pointed to the Australian 1997 Human Rights and Equal Opportunity Commission (HREOC) inquiry as a model. Both processes also saw significant delays between inquiries, apologies and reparations that were affected by changes in federal governments, ideological positions and lack of political will.

Since 1990 there has been a series of international inquiries into institutional child abuse, including Australia, Canada, Denmark, Ireland, New Zealand, Norway, Sweden, United Kingdom and the United States of America (Wright *et.al*. 2017). Assimilation policies, child removal and cultural suppression are only one element of the processes of colonisation, dispossession and marginalisation experienced by First Nations peoples in settler societies (Haebich 2010, Maddison 2019). Our experience in Australia is by no means unique, but the level of disparity represented in the significant ongoing gaps in health and life outcomes (including education, employment, poverty, incarceration, mental health, and suicide as well as child protection outcomes) remain particularly stark (Marmot 2008, PM&C 2018, Holland 2018).

Most Australians are aware of the 'Stolen Generations' as a result of the public profile of the *National Inquiry into the Separation of Aboriginal and Torres Strait Islander Children from their Families* in 1995 that led to the *Bringing Them Home Report* in 1997, and the subsequent National Apology to the Stolen Generations by Prime Minister Kevin Rudd a decade later in 2008. However, relatively few are aware of the extent of impact throughout the Aboriginal community and its ongoing effects on family life. The *Royal Commission into Aboriginal Deaths in Custody* between 1987 and 1991 played a critical role in exposing the life histories of members of the Stolen Generations who ultimately died in custody. Its findings and stories were arguably a critical factor in the establishment of the inquiry into systematic child removal by HREOC.[14] The report of the Royal Commission notes at its outset the critical role that history played in the lives of those who died in custody, particularly the significant numbers who shared a common history of removal and institutionalisation as a child, often accompanied by physical and sexual abuse. Close to half of the deaths in custody (43 of 99) examined during the Royal Commission, including more than half of the deaths in NSW and WA,

[14] Other key drivers were the ongoing advocacy by SNAICC and Link-Up NSW, and the 1994 *Going Home Conference* in Darwin that was attended by Stolen Generation representatives from every State and Territory.

had been forcefully separated from their families as children. The Royal Commission recommendations also highlighted the importance of self-determination and the role of Aboriginal organisations in addressing the critical factors leading to over-representation in custody, supporting diversion and rehabilitation, and referred specifically to the *Aboriginal Child Placement Principle* (RCIADC 1991).

Aboriginal peoples within Western Australia were disproportionately impacted by child removal policies. The ABS NATSIS (1994) and NATSISS (2002, 2008, 2014) survey waves found 10.1% of the Aboriginal and Torres Strait Islander population aged 25 years or over in 1994 were forcibly separated from their family nationwide (i.e. around 1 in 10 adults). The removal rate was significantly higher for WA, with 17.8% of those aged over 45 in 2002 removed (i.e. close to 1 in 6 Aboriginal Western Australian adults removed from their families as children). Significantly, *over half* (53.7%) of Aboriginal Western Australians aged 15 years or over in 2002 had either been forcibly separated themselves or had a close relative who had been – substantially higher than the national rate of 37.6%. More recent AIHW (2018) analysis of the 2014 ATSISS data indicates that WA has the highest reported rate of removal (23.8% in 2014–15), nearly twice the rate of removal at the national level (13.5% in 2014–15) and 7.6 points (or close to one third) higher than South Australia, the state with the next highest rate.

Evidence shows that those who had been affected by forced removal experienced significantly poorer health outcomes, higher incidence of mental health conditions and were more likely to report stressful life events within the last 12 months. The Western Australian Aboriginal Child Health Survey (2004) survey identified 12.3% of primary carers in WA had been forcibly separated from their natural family, and that *over one third* (35.3%) of Aboriginal children in WA were living in a household where a carer or that carer's parent had been forcibly separated. The survey found that Aboriginal children whose carers had been forcibly separated from their natural family *were more than twice as likely* to be at high risk of clinically significant emotional or behavioural difficulties. They were also more likely to be at high risk of clinically significant emotional symptoms (over 1.5 times), conduct problems (over 1.5 times) and hyperactivity (over 2.5 times), and had levels of alcohol and other drug use twice as high as their peers (Zubrick et.al. 2004, De Maio *et.al* 2005).

The implication of these findings is that Stolen Generation parents and carers have much higher risk factors, and their children have much higher risk factors. Taken together, we'd expect this to lead to worse outcomes within the child protection system. Further, Stolen Generation parents and carers removed at a young age and brought up in institutional settings are unlikely to have been exposed to effective *parenting skills* and behaviours. Attachment is likely to be less secure, more anxious, inconsistent or problematic. Levels of *trauma* are likely to be more significant, with traumatic events linked explicitly to childhood events (Atkinson 2013, Atkinson *et.al.* 2010, van der Kolk 2007, Chiu *et.al.* 2013). *Distrust of authority* is also likely to differ in both scale and kind, with the direct association between state and church authorities and the experience of removal, mistreatment and lack of procedural fairness (Anderson & Wild 2007, Hunter 2008). Hence a review of relevant research indicates that Aboriginal families, particularly those affected by systematic child removal policies, experience both increased *extent* of common child protection risk factors (including poverty, exclusion, lack of access to support) as well as differences in *kind* (impacts of inter-generational trauma, lack of experience of parenting) that need to be addressed by responsive and culturally secure child safety and family support services.

WA has the highest reported rate of removal (23.8% in 2014–15), nearly twice the rate of removal at the national level (13.5% in 2014–15).

Unless we are prepared to invest in and able to implement effective family support services that reduce the growth in out-of-home care, the growing demand for expensive tertiary services will continue to result in growing costs and poor long-term outcomes.

THE WAY FORWARD

The current challenge facing Australia and WA is growing demand for and cost of tertiary child protection systems during a time of fiscal restraint. Increasing resources are required to meet statutory responsibilities for children in care, putting pressure on the number of resources available for secondary services seeking to divert children from care and support families to keep children safe at home. Unless we are prepared to invest in and able to implement effective family support services that reduce the growth in out-of-home care, the growing demand for expensive tertiary services will continue to result in growing costs and poor long-term outcomes.

This problem is particularly acute for Aboriginal children and families. The Western Australian child protection system has one of the highest rates of over-representation of First Nations children anywhere in the world. If we are to turn these numbers around and reduce the spiral of rising costs, worsening outcomes and growing inequality, we need to work with Aboriginal families and communities, particularly those with lived experience, to co-design a more targeted and effective response to reduce the number of children going into care. The evidence above suggests that we need to deal with both those risk factors that relate to disadvantage to ensure that families are genuinely able to care for their children and keep them safe (hence tackling poverty, access to services and resources, overcrowded housing) and to deal with the legacy of past (trusted and culturally secure local services that address intergenerational trauma and strengthen parenting skills). Further, a solution that is owned by Aboriginal communities can contribute to their economic independence and wellbeing.

Amendments to the *Children and Community Services Act 2004* are currently before the WA Parliament. While legislative change is critical and the changes currently proposed offer some improvement to existing requirements, they are of comparatively limited scope. The reform bill indicates an intention to ensure Aboriginal children develop and maintain connection with community, culture and country, and includes provisions requiring close consultation with an Aboriginal representative organisation before a child placement decision is made. They will also require that interpreters be made available to assist people who have difficulty communicating in English or have a disability that restricts their participation in a decision-making process.

While these are steps in the right direction, the changes remain some way behind reforms implemented in other jurisdictions in recent years, and do not appear to meet community expectations of more extensive and inclusive reforms. Decision-making still rests with the State, and the influence of the family or a representative community organisation depends on the discretion of child protection authorities. This falls short of implementing the National Aboriginal and Torres Strait Islander child placement principles, the recommendations of the 2014 *Statutory Review of the Children and Community Services Act*, and remains behind the reforms introduced in Queensland in 1999 and Victoria in 2005[15] that have provided the basis for the progressive enactment of Aboriginal Family Led Decision Making (AFLDM). Trials of AFLDM in WA have just been announced by the Minister,[16] with an initial focus on reducing infant removals and improving reunification outcomes and locations and partners are yet to be released – potentially paving the way for further reforms.

15 For more detailed analysis see WACOSS Submission to the Inquiry into the CCS Act 2020 p4-5.

16 *New trial to help address number of Aboriginal children in care*. Media Statement, Simone McGurk, Minister for Child Protection, Women's Interests, Prevention of Family & Domestic Violence, Community Services. 10/8/2020.

Some key recommendations of the *Final Report of the Royal Commission into Institutional Responses to Child Sexual Abuse* (Joint Standing Committee 2019) have not been incorporated in the Bill, including extended mandatory reporting requirements, establishment of a single independent oversight body, and extending the age of leaving care to 21 years. Ongoing work is occurring in these areas in WA, with trials of enhanced support for care leavers underway, changes that enable assistance to be provided to care leavers up to age 25, and ongoing discussions with key stakeholders about child protection system oversight (WACOSS 2020).

The WA Department of Communities developed an *Aboriginal Community Controlled Organisation Strategy* in late 2017 that commits to increase the role of Aboriginal Community-Controlled Organisations (ACCOs) in the delivery of child protection, early intervention and family support services. The strategy builds on community-based initiatives that agreed partnership principles across mainstream and Aboriginal community services (APONT 2014, ACOSS 2015, WACOSS 2019). Evidence on the comparative efficacy of Aboriginal community-controlled *health* services in increasing the trust and engagement of their communities to deliver better health outcomes is well established in WA (AHRC 2017, NACCHO 2012, Tilbury 2015, SNAIC 2013, 2016) and their efficacy clearly demonstrated in the COVID-19 pandemic response across Australia. ACCOs have played a critical role in delivering parenting and child safety services in Victoria and NSW for over a decade, and Queensland have put in place reforms to extend their role in child protection decision-making and case management.

These policies offer a way forward for developing a community-based service system that is better able to respond to the needs of Aboriginal children and families. However, a number of factors have hampered their implementation in WA, including restructuring of responsible government departments and agencies, an environment of tight budget targets with no new resources to build the capacity of ACCOs, and a trend of shifting to fewer and larger service contracts that effectively exclude smaller place-based services. Without a targeted effort and resources to build capacity to effectively engage in procurement processes, it is unlikely that we will see new ACCO services emerging. Given the knowledge, experience and local capability of Aboriginal Health Services across regional and metropolitan WA, they would be ideal partners to help develop local ACCOs and assist in managing an effective Aboriginal care workforce.

A better way forward is possible. Our children are our future and we owe it to them to give them the best opportunity to develop their unique potential and create a better world. Let us keep them safe to grow and thrive in family, community and culture.

ACCOs have played a critical role in delivering parenting and child safety services in Victoria and NSW for over a decade, and Queensland have put in place reforms to extend their role in child protection decision-making and case management.

SUMMARY AND RECOMMENDATIONS

SUMMARY AND RECOMMENDATIONS

Our children's development through the early years, their happiness, the opportunity to follow their dreams and achieve their full potential, are fundamentally affected by their experiences of self, family, and the world around them.

What happens in those early years has a profound and lasting impact on future outcomes, and can either help or hinder children in reaching their full potential. How much early experiences either help or hinder children to reach their full potential is in our hands.

This latest report in the Bankwest Curtin Economics Centre's Focus on Western Australia series looks to add to our understanding of the lives of young children in Australia, the environment within which they live and learn, and the services provided to families to enable their children to thrive.

In laying out the narrative for the report, our goal has been to follow a child's journey from pregnancy and birth, through toddlerhood to preschool. The report focuses on some of the most important aspects of life through that journey, looking at a child's health and wellbeing from the earliest stages of life, their cognitive and emotional development, their experiences of early learning and equity of access to learning resources.

The report's findings offer a deeper understanding of the breadth, depth and drivers of disadvantage in the early years of a child's life, the impact of disadvantage on child outcomes, and the reinforcing effects of inequities in access to financial, developmental and learning resources.

Disadvantage starts during pregnancy and extends through toddlerhood and the preschool years. Significant differences in child outcomes are evident across a breadth of domains including mental health, language development and early learning, well before formal school commences. The scope and depth of the disadvantages faced by young children and their families are often related to poverty, socioeconomic status, regional location, Indigenous status and cultural background.

We all care for our children and want them to have the best start in life. Putting children at the centre of policy and public engagement is a powerful way to build community ownership and strengthen public participation.

Strategies that put the best interests of children first inevitably focus on the long-term and the good of the wider community – it is simply good public policy. Investing in the Early Years is investing in our future.

Pregnancy and Birth

The report's analysis of critical antenatal care visits within the first 14 weeks of pregnancy shows how differences can begin to emerge even at the earliest stages of life, with significant variation across WA regions and even across metropolitan areas of Perth. This adds to other research findings in identifying cultural and linguistic diversity, remoteness and socio-economic disadvantage as key drivers of differences in attendance at antenatal clinics within the first trimester of pregnancy.

Western Australia has improved significantly in the share of women who refrained from alcohol during pregnancy, rising from 46 per cent to 65 per cent in only three years. This suggests that there is an increased awareness of the negative health impacts of alcohol consumption during pregnancy.

But risky behaviours during pregnancy do differ for women across the state's regions, with far higher smoking rates during pregnancy in regional and remote areas of Western Australia.

Links between greater disadvantage, lower birth weights and infant deaths are also evident. Across WA, deaths of infants aged less than one year in more disadvantage areas are 4.9 per 1,000 births, compared to 2.0 per 1,000 births for areas with the greatest advantage.

There is a more positive picture for immunisation rates, which averaged 91% across Australia from 2008 to 2016 and similar rates for Western Australia. Immunisation rates for Indigenous children in WA (89%) are slightly below that of non-Indigenous children (91.2%), but are the highest in regional and remote areas of WA (94%).

These findings provide support for greater investment in culturally appropriate preventative health services, and in public health campaigns designed to engage effectively with culturally diverse and remote communities, to reinforce the benefits of avoiding risky behaviours during pregnancy and the importance of early check-ups.

Toddlerhood (1-3 years)

During the toddler years, children undergo rapid developmental changes, especially in language and social skills, but also physically. They learn to walk, climb and run, catch and throw a ball and by the time they reach three are likely able to dress themselves and are forming coherent sentences.

In WA, an estimated 1 in 4 toddlers have behavioural problems, and around 1 in 6 toddlers display social-emotional competence problems. Both rates are higher than the national average.

Unsurprisingly, a child's development is fundamentally influenced by the environment around them. This includes the connections they form with their primary caregiver, but also their broader socio-economic environment.

The warmth and affection a parent shows towards their child is enormously beneficial to children's physical and mental health outcomes, cognitive development and social-emotional competence.

On the obverse side severe poverty is shown clearly to have a detrimental effect on child development outcomes, with nearly three in ten toddlers from households living in severe poverty facing delays in their language development.

The Community Child Health Program provided by WA Department of Health offers free health assessments to all parents, which include screening, immunisation advice and family support.

However, the number of parents accessing state-provided free health check assessments for their children declines substantially as children age, from almost universal attendance for the first antenatal visit to only a quarter of children receiving health checks at two years of age. This is a critical period during which a number of developmental issues and vulnerabilities can emerge.

The decline may be a result of a progressively larger share of families accessing GP or private health care and medical assessments for their children. Whatever the reason for the decline, it is clearly important that access rates across all equity groups continue to be monitored, and that every opportunity is taken to communicate the availability of the Community Child Health Program throughout the period from birth to two years of age.

The preschool years (3-5 years) and Early Learning Disadvantage

Access to high quality early childhood education during the preschool years provides a tremendous springboard for children as they prepare to enter the world of formal education, with developmental benefits that are both considerable and well established.

Under the National partnership Agreement, all Australian children in the year before commencing formal schooling should now be accessing at least 15 hours of preschool each week.

In Western Australia, the evidence presents an encouraging picture of increased attendance at preschool over the last two years, particularly among children from low socio-economic areas. The share of children enrolled in preschool in these areas has increased by more than 10 percentage points and attendance at pre-school for 15 hours each week has increased by 4 percentage points across all groups.

However, nearly 30 per cent of children enrolled in preschool are accessing less than 15 hours of education each week in the year before formal schooling starts.

While improvements have narrowed gaps across priority groups, it remains the case that only 50 per cent of Indigenous children are accessing 15+ hours of preschool each week, compared to 70 per cent of non-Indigenous children.

Responsibility for the provision of preschool education lies with states and territories, but the National Partnership Agreement includes Commonwealth funding to the states to ensure that all children can access at least 15 hours of preschool each week in the year before formal schooling.

Despite progress towards this target, there are still inequalities in the shares of children receiving the 15 hours of preschool prescribed by the Agreement, to the disadvantage of Indigenous children, those from a non-English speaking background, and children with a disability.

This report also highlights major differences in how preschool programs are delivered across states. In New South Wales, two-thirds of children receiving preschool education do so through centre-based programs. Yet in Western Australia, only 6 per cent of children receive a preschool program through centre-based care, with three quarters of children accessing stand-alone pre-school programs.

Parents in Western Australia are also more likely to spread their children's early learning and care arrangements across multiple providers compared to other jurisdictions, with one in five children enrolled across more than one preschool provider.

These different patterns of access to preschool care in Western Australia are driven by a funding model in which national partnership funding is provided exclusively to schools with an on-site preschool premises.

The Geography of Early Learning Disadvantage

The report also presents findings from the new *BCEC Early Learning Disadvantage Index*, which maps areas of relative advantage and disadvantage across Australia's geography based on a number of indicators of a well-functioning early learning system. Findings from this index serve as a salutary reminder of the extent of inequality in educational opportunity across geographical areas, and reveals some of the key drivers of educational disadvantage in the early years.

We find that children in the most disadvantaged areas are ten times more likely not to be accessing 15 hours of preschool, and 16 times more likely to be vulnerable across multiple developmental domains, compared to the ten most advantaged areas. The most disadvantaged areas are typically located in remote and very remote regions of Western Australia and the Northern Territory, areas with a high proportion of Indigenous children who by virtue of location alone face disadvantage from the earliest stages of their lives.

Given that many of the challenges in delivering early learning and care are driven by location, some of the most effective solutions are also likely to be place-based. Community programs that have overcome locational challenges and achieved positive early learning outcomes could present policymakers with some powerful case studies about what works, as well as offering options for program design and resource allocation.

And more broadly, the findings from the analysis of the Early Learning Disadvantage Index point towards a need for greater flexibility in preschool provision, alongside an adequate level of income support for families with young children.

Recommendations:

- Identification and profiling communities that deliver positive early learning outcomes relative to broader socioeconomic disadvantage within the community through detailed local area indicator mapping.

- Identification of additional access barriers (including localised barriers) to ensure all children are accessing at least 15 hours of preschool education, with identifiable and measurable actions to achieve the target.

- Greater flexibility in the provision of preschool across the entire early childhood education and care sector. This includes a review of current exclusions to National Partnership Agreement funding to enable centre-based care funding access to install preschool programs delivered by qualified pre-school teachers.

Child protection

Care and safety in the early years are critical for lifelong development. Concern about the risk of harm or neglect has resulted in increasing numbers of young children, including infants, being taken into care. While this is an international trend, it is of particular concern in Western Australia.

Children growing up in out-of-home care continue to have poorer life outcomes, despite the rising cost of care. Early intervention with intensive family support services to help families keep children safe at home could reduce the long-term cost of care, but more investment is needed before the demand for expensive tertiary services can be reduced.

The report highlights the disproportionate numbers of Aboriginal and Torres Strait Islander children in child protection systems, with an Indigenous child aged between zero and four years old in WA 19.3 times more likely to be in out-of-home care than a non-Indigenous child.

Higher rates of Indigenous children removed from their families and raised in institutions in WA as part of the 'stolen generations' policies are linked to a loss of parenting skills and problems with attachment. Culturally secure and trauma-informed family support services are needed to undo past harms, break the cycle of inter-generational trauma, and improve early childhood outcomes.

Federal and State governments have committed to grow the role of the Aboriginal community-controlled sector to provide more responsive services, but resources are needed to build the workforce and put the policy into practice.

Our children are the future. We must ensure they are safe and secure within our community and given the encouragement and support they need to thrive.

Recommendations:

- Expand investment in early intervention strategies that provide intensive family support as a means to reduce the need to remove children into care, especially Indigenous children.
- Develop trauma-informed and culturally secure services to address the specific needs of Aboriginal parents and carers with a history of inter-generational trauma. This support is best delivered by local Aboriginal community-controlled services, in line with Federal and State commitments to grow the Aboriginal care workforce.
- Embed long term evaluation programs for early intervention strategies, to measure the return on investment of early intervention over the life-cycle.
- Ensure the rights of children in care are protected, including mandated access to an independent advocate, as recommended by the *Royal Commission into Institutional Responses to Child Sexual Abuse*.
- Extend the target of delivering 35,000 additional homes for people on low incomes over the decade to 2020, at least matching this commitment to expand the construction of social housing over the decade from 2021.
- Incentivise investment to expand the availability and affordability of low-cost rental housing for low-income families with children.

Child poverty

The absence of adequate income and economic resources is a common and recurring theme throughout our report. Poverty and disadvantage begin early in life, well before a child is born and is linked with a number of adverse behaviours and outcomes.

This includes an increase in risk-taking during pregnancy, a higher likelihood of a child dying before the age of one, greater parenting stress and challenges when children are toddlers, a lower likelihood of children accessing preschool in the year before school and a far greater chance that a young child will be involved in the child protection system and removed from their family at a very young age.

Our report shows that families with children under the age of five are more likely to be living in poverty compared to other families, and that this trend has been increasing over the last decade.

Currently, more than one in five children under 5 in Western Australia are living in poverty, with 11.4 per cent in severe financial hardship. This means that a single parent in severe poverty with a young child under five could face living on less than $370 a week after paying for housing.

A number of factors have contributed to this rising trajectory including housing costs. We also find that out-of-pocket childcare costs contribute to an increased likelihood of poverty, even after childcare subsidies are factored in.

This brings into sharp focus the question of adequacy of income support payments and government assistance, and the need to ensure that payments are set at a rate that serves to protect our most vulnerable population

Recommendations:

- Improve the adequacy of government financial support for those greatest need by raising the basic payment for JobSeeker and related allowances and pensions (including Parenting Payment) to at least the poverty threshold of 50 per cent of median equivalised income.

- Once increased, maintain the real rate of JobSeeker and related payments by uprating annually in line with at least CPI.

- Ensure that Child Care Subsidy rates are kept under close review, particularly eligibility requirements that are linked to workforce participation.

- Actively consider providing universal free access to high quality child care services for all children below school age.

- Ensure that all states and territories maintain regular reporting on child poverty rates, to include specifically poverty rates for young children.

Review state concessions for utilities costs and rates, ensuring their accessibility, adequacy and appropriateness for reducing child poverty for families with young children.

GLOSSARY AND TECHNICAL NOTES

GLOSSARY

AEDC Scores

For each domain, an AEDC domain score is calculated by combining together information on the specific domain items, provided that each child has 75 per cent or more of these items completed. For each of the five AEDC domains, children receive a score between zero and ten, where zero is most developmentally vulnerable.[17] The three Domain Indicator categories, and associated 'cut-off' scores are outlined in Table 2. The cut-off scores used in 2009 have remained the same across each collection cycle to provide a reference point against which later AEDC results can be compared.

Source: AEDC (2015) Australian Early Development Census National Report 2015: A Snapshot of Early Childhood Development in Australia.

AEDC Language Background Other than English

Language background other than English (LBOTE) Children are considered 'LBOTE' if they speak a language other than English at home, or if they speak English at home but are still considered to have ESL status. Indigenous children who have LBOTE status are part of the LBOTE group. For example, it is possible for children to be both Indigenous and have LBOTE status.

Source: AEDC (2015) Australian Early Development Census National Report 2015: A Snapshot of Early Childhood Development in Australia

AEDC Socio-Economic Indexes for Areas (SEIFA)

The AEDC classifies socio-economic status according to the Socio-Economic Indexes for Areas (SEIFA), developed by the Australian Bureau of Statistics (ABS). They are a set of measures, derived from Census information, that summarise different aspects of socioeconomic conditions in an area. The Index for Relative Socio-Economic Disadvantage, which is used in AEDC results, looks at Census information that reflects disadvantage such as low income, low educational attainment, high unemployment, and jobs in relatively unskilled occupations. Every geographical area in Australia is given a SEIFA score that ranks the disadvantage of an area, compared with other areas in Australia.

Source: AEDC (2015) Australian Early Development Census National Report 2015: A Snapshot of Early Childhood Development in Australia

State-specific year before full-time schooling (YBFS)

The state-specific year before full-time schooling (YBFS) population is made up of an age range of children specific to each state based on that state's preschool and school starting age provisions.

Source: 4240.0 - Preschool Education, Australia, 2019

17 The Australian Government has licenced the domain score calculation methodologies from the Offord Centre of Child Studies at www.offordcentre.com operating through McMaster University in Canada. These calculation methodologies are the intellectual property of McMasters and are not available to the public. The Domain scores are population based measure of children's development and have not been psychometrically tested for application in relation to individual children.

Remoteness Structure

The Remoteness Structure is a geographic classification designed by the ABS in the Australian Statistical Geography Standard (ABS Cat. No. 1270.0.55.005). The concept of remoteness is an important dimension of policy development in Australia. The provision of many government services are influenced by the typically long distances that people are required to travel outside the major metropolitan areas.

Remoteness Area classifies areas sharing common characteristics of remoteness into six broad geographical regions. The remoteness of a point is measured by its physical distance by road to the nearest urban centre. As remoteness is measured nationally, not all Remoteness Areas are represented in each state or territory. The six Remoteness Areas are: Major Cities of Australia; Inner Regional Australia; Outer Regional Australia; Remote Australia; Very Remote.

The five Remoteness Areas are:

- Major Cities – relatively unrestricted accessibility to a wide range of goods and services and opportunities for social interaction.
- Inner Regional – some restrictions to accessibility of some goods, services and opportunities for social interaction.
- Outer Regional – significantly restricted accessibility of goods, services and opportunities for social interaction.
- Remote – very restricted accessibility of goods, services and opportunities for social interaction.
- Very Remote – very little accessibility of goods, services and opportunities for social interaction.

Statistical Area Level 2 (SA2)

The Statistical Area Level 2 (SA2) is an area defined in the Australian Statistical Geography Standard (ASGS), and consists of one or more whole Statistical Areas Level 1 (SA1s). Wherever possible SA2s are based on officially gazetted State suburbs and localities. In urban areas SA2s largely conform to whole suburbs and combinations of whole suburbs, while in rural areas they define functional zones of social and economic links. Geography is also taken into account in SA2 design. SA2s cover, in aggregate, the whole of Australia without gaps or overlaps.

REFERENCES

REFERENCES

ABS (2004). National Aboriginal and Torres Strait Islander Social Survey, 2002 (NATSISS). Australian Bureau of Statistics, Canberra ACT. Cat. 4714.0.

ABS (2009). National Aboriginal and Torres Strait Islander Social Survey, 2008 (NATSISS). Australian Bureau of Statistics, Canberra ACT. Cat. 4714.0.

ABS (2017). National Aboriginal and Torres Strait Islander Social Survey, 2014-15 (NATSISS). Australian Bureau of Statistics, Canberra ACT. Cat. 4714.0.

ACOSS (2015). Principles for a Partnership-centred approach for NGOs working with Aboriginal and Torres Strait Islander Organisations and Communities. Australian Council of Social Service, Sydney. acoss.org.au.

AEDC (2015a) Australian Early Development Census: Factors found to affect children's success at school

AHRC (2017). *Close the Gap: Progress and priorities report 2017*. Australian Human Rights Commission, Sydney. ahrc.org.au

AIHW (2018). *Aboriginal and Torres Strait Islander Stolen Generations and descendants: numbers, demographic characteristics and selected outcomes*. Cat. no. IHW 195. Canberra.

AIHW 2018, Australia's mothers and babies 2016 - in brief, Perinatal statistics series no 34, Cat No Per 97. Canberra: AIHW.

AIHW (2019). Child protection Australia: 2017–18. Child welfare series no. 70. Cat. no. CWS 65. Canberra: AIHW.

AIHW (2020). Child protection Australia 2018–19. Child welfare series no. 74. Cat. no. CWS 74. Canberra: AIHW.

ALSWA (1995). Telling Our Story: A report of the removal of Aboriginal children from the families in Western Australia. Aboriginal Legal Service of Western Australia, Perth.

Anderson, P. & Wild, R. (2007). *Ampe Akelyernemane Meke Mekarle Little Children are Sacred: Report of the Northern Territory Board of Inquiry into the Protection of Aboriginal Children from Sexual Abuse.* Darwin, Northern Territory

APONT (2014). *Partnership Principles for NGOs working with Aboriginal organisations and communities in the Northern Territory.* Aboriginal Peak Organisations of the Northern Territory, Darwin. apont.org.au.

Atkinson, J. (2013) *Trauma-informed services and trauma-specific care for Indigenous Australian children*. Resource sheet no. 21 produced for the Closing the Gap Clearinghouse.

Atkinson J, Nelson J & Atkinson C 2010. *Trauma, transgenerational transfer and effects on community wellbeing*. In: Purdie N, Dudgeon P & Walker R (eds). Working together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice. Canberra: Australian Government Department of Health and Ageing, 135–144.

Aunola, K., and Nurmi, J. (2005). The Role of Parenting Styles in Children's Problem Behavior. *Child Development*. 76(6): 1144 – 1159.

Australian Institute of Health and Welfare 2018, Children's Headline Indicators – Infant Mortality, AIHW [website]

Bankwest Curtin Economics Centre (2017) *Educate Australia Fair? Education inequality in Australia*

Banyard, V. (1997). The Impact of Childhood Sexual Abuse and Family Functioning on Four Dimensions of Women's Later Parenting. Child Abuse and Neglect. 21(11): 1095-1107.

Baranick, E., Baird A. and Vinze A. (2015). *An economic framework for transitioning to capacity building.* Global Public Health. 10(1) 15-27.

Baxter J (2015) Child care and early childhood education in Australia. Australian Institute of Family Studies Fact Sheet 2015.

Benoit, D. (2004). Infant-parent attachment: Definition, types, antecedents, measurement and outcome. PAEDIATRICS & CHILD HEALTH, 9(8): 541–545. https://doi.org/10.1093/pch/9.8.541

Benton, M, Pigott R, Price, M, Shepherdson, P & Winkworth, G. (2017). *A national comparison of carer screening, assessment, selection, training and support in foster, kinship and residential care.* Royal Commission into Institutional Responses to Child Sexual Abuse, Sydney.

Bethell, C., Forrest, C., Stumbo, S., Gombojav, N., Carle, A., Irwin, C. (2012). Factors Promoting or Potentially Impeding School Success: Disparities and State Variations for Children with Special Health Care Needs. *Maternal and Child Health*. 16: 35-43.

Bilson, A. and Martin, K.E.C. (2016). *Referrals and child protection in England: One in five children referred to children's services and one in nineteen investigated before the age of five*. British Journal of Social Work, 0, 1-19.

Bilson, A., Cant, R.L., Harries, M. and Thorpe, D. R. (2015). A Longitudinal Study of Children Reported to the Child Protection Department in Western Australia. British Journal of Social Work 45, 771–791.

Blackstock, C. (2009). *The occasional evil of angels: learning from the experiences of Aboriginal peoples and social work.* First Peoples Child and Family Review, 4(1), 28-37.

Blair, C. (2002). School Readiness Integrating Cognition and Emotion in a Neurobiological Conceptualization of Children's Functioning at School Entry. American Psychologist. 57(2): 111–127.

Booth, T. T. (2009). *Cheaper than bullets: American Indian boarding schools and assimilation policy 1890-1930*. University of Central Oklahoma Press, USA.

Boyd, R. (2014). *African American disproportionality and disparity in child welfare: towards a comprehensive conceptual framework.* Children and Youth Services Review (37) 15-27.

Bradwell, P. and Marr, S. (2008). *Making the most of collaboration: An international survey of public service co-design*. DEMOS. UK. demos.org.uk

Breunig *et al* (2012). Breunig, R., Gong, X. and King, A. "Partnered Women's Labour Supply and Child-Care Costs in Australia: Measurement Error and the Child-Care Price". Economic Record 88. Special issue, June 2012, pp. 51–69.

Briggs-Gowan, M.J., and Carter, A.S. (2008). Social-Emotional Screening Status in Early Childhood Predicts Elementary School Outcomes. *Pediatrics*. 121(5): 957-962; DOI: https://doi.org/10.1542/peds.2007-1948.

Burkett, I. (2012). *An Introduction to Co-design: Co-designing for social good*. Centre for Social Impact.

Bywaters, P. (2015) *Inequalities in child welfare: towards a new policy, research and action agenda.* British Journal of Social Work 45 6-23.

Bywaters, P., Brady, G., Sparks, T. and Bos, E. (2014) *Inequalities in child welfare intervention rates: The intersection of depravation and identity*. Child & Family Social Work 21(4) 1-12.

Bywaters, P., Brady, G., Sparks, T., Bos, E., Bunting, L., Daniel, B., Featherstone, B., Morris, K and Scourfield, J. (2015). *Exploring inequities in child welfare and child protection services: Explaining the 'inverse intervention law'.* Children and Youth Services Review 57 98-105.

Bywaters, P., Kwhal, J., Brady, G., Sparks, T and Bos, E. (2016). *Out of Sight, Out of Mind: Ethnic Inequalities in Child Protection and Out-of-Home Care Intervention Rates.* British Journal of Social Work 47(7) 165-1902.

Campbell, F., Conti, G., Heckman, J.J, Moon, S.H., Pinto, R., Pungello1, E., and Pan., Y. (2014). Early Childhood Investments Substantially Boost Adult Health. *Science*. 343(6178): 1478-148. DOI: 10.1126/science.1248429

Cassidy, J. (2006). *The best interests of the child? The stolen generations in Canada and Australia.* Griffith Law Review 15(1) 111-152.

Chabot, M., Fallon, B., Tonmyr, L., MacLaurin, B., Fluke, J. and Blackstock, C. (2013). *Exploring alternate specifications to explain agency-level effects in placement decisions regarding Aboriginal children: Further analysis of the Canadian Incidence Study of reported Child Abuse and Neglect Part B.* Child Abuse & Neglect, 37, 61-76.

Chiu, G. R., Lutfey, K. E., Litman, H. J., Link, C. L., Hall, S. A., & McKinlay, J. B. (2013). *Prevalence and overlap of childhood and adult physical, sexual, and emotional abuse: A descriptive analysis of results from the Boston Area Community Health (BACH) survey.* Violence and Victims, 28(3), 381-402.

Churchill, H and Fawcett, B. (2016). *Refocusing on Early Intervention and Family Support: A Review of Child Welfare Reforms in New South Wales, Australia*. Social Policy & Society 15(2), 303-316.

Clarkson M. (2015). *Walk Alongside: Co-designing Social Innovation with People Experiencing Vulnerabilities.* Victorian Council of Social Services. vcoss.org.au

Colson, E.R., and Dworkin, P.H. (1997). Toddler Development. *Pediatrics in Review*. 18(8), 255-259.

Commissioner for Children and Young People WA (2019) *Improving the odds for WA's vulnerable children and young people.*

Connell, A. M., and Goodman, S. H. (2002). The association between psychopathology in fathers versus mothers and children's internalizing and externalizing behavior problems: A meta-analysis. PSYCHOLOGICAL BULLETIN, 128(5), 746–773. https://doi.org/10.1037/0033-2909.128.5.746.

CWIG (2016). *Racial disproportionality and disparity in child welfare*. Child Welfare Information Gateway, US Department of Health and Human Services, Washington DC.

Davidson, P., Saunders, P., Bradbury, B. & Wong, M. (2018) *Poverty in Australia*, 2018, ACOSS/UNSW Poverty and Inequality Partnership Report No. 2

De Maio JA, Zubrick SR, Silburn SR, Lawrence DM, Mitrou FG, Dalby RB, Blair EM, Griffin J, Milroy H, Cox A. (2005). *The Western Australian Aboriginal Child Health Survey: Measuring the Social and Emotional Wellbeing of Aboriginal Children and Intergenerational Effects of Forced Separation.* Perth: Curtin University of Technology and Telethon Institute for Child Health Research.

Department of Education and Training (2019). Australian Early Development Census (AEDC): Data Guidelines.

Department of Education and Training (2018). Australian Early Development Census National Report 2018: A snapshot of early childhood development in Australia.

Dockery, A. M. (2012), "Do traditional culture and identity promote the wellbeing of Indigenous Australians? Evidence from the 2008 NATSISS," in Hunter, B. & Biddle, N. (eds) *Survey analysis for Indigenous policy in Australia: Social science perspectives,* Research Monograph No. 32, Centre for Aboriginal Economic Policy Research, Australian National University E Press, Canberra, pp. 281-305

Dockery, A.M. (2020), 'Inter-generational transmission of Indigenous culture and children's wellbeing: Evidence from Australia', *International Journal of Intercultural Relations*, Vol. 74, pp. 80-94, https://doi.org/10.1016/j.ijintrel.2019.11.001.

Doidge J.C., Higgins D.J., Delfabbro, P., Edwards, B., Vassallo, S., Toumbourou, J.W. & Segal, L. (2017). *Economic predictors of child maltreatment in an Australian population-based birth cohort*. Children and Youth Services Review 72, 14–25.

Dollaghan C.A., Campbell T.F., Paradise J.L., Feldman H.M., Janosky J.E., Pitcairn D.N., Kurs-Lasky M. (1999). Maternal Education and Measures of Early Speech and Language. *Journal of Speech, Language & Hearing Research*. 42(6): 1432-1443.

Doolan, I., Najman, J. M., Mills, R., Cherney, A. and Strathern, L. (2013). *Does child abuse and neglect explain the overrepresentation of Aboriginal and Torres Strait Islander young people in youth detention? Findings from a birth cohort study*. Child Abuse & Neglect. 37 303-309.

Douglas, H. and Walsh, T. (2013). *Continuing the stolen generations: Child protection interventions and Indigenous people.* International Journal of Children's rights 21 50-87.

Dowell, CM., Mejia, GC., Preen DB,, & Segal, L. (2018). *Maternal incarceration, child protection, and infant mortality: a descriptive study of infant children of women prisoners in Western Australia.* Health and Justice 6(2). 1-12.

Doyle, O., Harmon, C.P., Heckman, J.J., and Tremblay, R.E. (2009). Investing in early human development: Timing and economic efficiency. *Economics and Human Biology.* 7:1-6.

Duncan A, James A and Rowley S (2019), 'Getting Our House In Order: BCEC Housing Affordability Report 2019', Bankwest Curtin Economics Centre, Focus on Western Australia Series, Issue #12, May 2019.

Edwards, M. and Barrie, J. (2013) *Co-design: More than sticky notes and goodwill*. ACT Council of Social Services Update: actcoss.org.au.

Executive Office of the President (2014) *2014 Native Youth Report*. The White House, Washington USA.

Fallon, B., Chabot, M., Fluke, J., Blackstock, C., MacLaurin, B., & Tonmyr, L. (2013). *Placement decisions and disparities among Aboriginal children: Further analysis of the Canadian incidence study of reported child abuse and neglect part A: Comparisons of the 1998 and 2003 surveys*. Child Abuse & Neglect, 37 (1), 47–60.

Fallon, B., Chabot, M., Fluke, J., Blackstock, C., Sinha, V., Allan, K. & MacLaurin, B. (2015). *Exploring alternate specifications to explain agency-level effects in placement decisions regarding Aboriginal children: Further analysis of the Canadian Incidence Study of Reported Child Abuse and Neglect Part C.* Child Abuse & Neglect, 49, 97-106.

Fallon, B., Trocme´, N., MacLaurin, B., Sinha, V., & Black, T. (2011). *Untangling risk of maltreatment from events of maltreatment: An analysis of the 2008 Canadian Incidence Study of Reported Child Abuse and Neglect (CIS-2008)*. International Journal of Mental Health and Addiction, 1 – 20.

Family and Children's Services (1996) *New Directions in child protection and family support*. Department of Family and Children's Services. Perth, Australia.

Featherstone, B., Morris, K., Daniel, B., Bywaters, P., Brady, G., Bunting, L., Mason, W and Mirza, N (2017). *Poverty, inequality, child abuse and neglect: Changing the conversation across the UK in child protection?* Children and Youth Services Review.

Fluke, J., Chabot, M., Fallon, B., MacLaurin, B., & Blackstock, C. (2010). *Placement decisions and disparities among Aboriginal groups: An application of the decision making ecology through multi-level analysis.* Child Abuse & Neglect, 34(1), 57–69.

Ford, Prudence (2007). *Review of the Department for Community Development: review report.* Dept. for Community Development, Perth, W.A

Front Project (2019) *A Smart Investment for a Smarter Australia: Economic analysis of universal early childhood education in the year before school in Australia*

Gilbert, R., Fluke, J., O'Donnell, M., Gonzalez-Izquierdo, A., Brownell, M., Gulliver, P., Janson, S and Sidebotham, P. (2012). *Child maltreatment: Variation in trends and policies in six developed countries*. Lancet, 379, 758–772.

Goldberg, W.A., and Easterbrooks, A.M. (1984). Role of Marital Quality in Toddler Development. Developmental Psychology. 20(3): 504-514.

Goodman, R. (2001). Psychometric properties of the Strengths and Difficulties Questionnaire. Journal of the American Academy of Child & Adolescent Psychiatry, 40(11), 1337-45.

Gordon, S., Hallahan, K and Henry, D. (2002). *Putting the picture together, Inquiry into Response by Government Agencies to Complaints of Family Violence and Child Abuse in Aboriginal Communities.* Department of Premier and Cabinet, Western Australia.

Graziano, P.A., Reavis, R.D., Keane, S.P., and Calkins, S.D. (2007). The role of emotion regulation in children's early academic success. *School Psychology*. 45 (1): 3–19.

Haebich, A. (2010) *Forgetting Indigenous histories: Cases from the history of Australia's stolen generations*. Journal of Social History 44(4) 1033-1046

Hafekost, K., Lawrence, D., O'Leary, C., Bower, C., O'Donnell, M., Semmens, J. and Zubrick, S.R. (2017). *Maternal alcohol use disorder and subsequent child protection contact: A record-linkage population cohort study*, Child Abuse & Neglect, 72, 206-214,

Halverson, K., Puig, M. E., & Byers, S. R. (2002). *Culture loss: American Indian family disruption, urbanization, and the Indian Child Welfare Act*. Child Welfare, 81(2), 319–336.

Harden, B.J., Denmark, N., Holmes, A., and Duchene, M. (2014). Detached Parenting and Toddler Problem Behavior in Early Head Start Families. Infant Mental Health. 35(6): 529-543.

Harries, M., Cant, R.L., Bilson, A and Thorpe, D. (2014). Responding to information about children in adversity: *Ten years of a differential response model in Western Australia.* Child Abuse & Neglect, 39, pp. 61-72

Harris, M.S. and Hackett, W. (2007). *Decision points in child welfare: An action research model to address disproportionality.* Children and Youth Services Review, 30, 199-215.

Harrison, C., Harries, M., and Liddiard, M. (2014). *The Perfect Storm: Politics, Media and Child Welfare Policy Making.* Community, Children and Families Australia, 8(2) 29-45.

Hawa, V.V., and Spanoudis, G. (2014). Toddlers with delayed expressive language: An overview of the characteristics, risk factors and language outcomes. *Research in Developmental Disabilities*. 23(2): 400-417.

Heckman, J.J. (2008). The Case for Investing in Disadvantaged Young Children, CESifo DICE Report. ifo Institut für Wirtschaftsforschung an der Universität München, München. 6(2), pp. 3-8.

Heckman, J.J. (2010). Effective Child Development Strategies. Retrieved from: http://artscimedia.case.edu/wp-content/uploads/sites/35/2014/02/14194019/Heckman-article-2010-child-development-strategies.pdf.

Hoff, E., (2003). The Specificity of Environmental Influence: Socioeconomic Status Affects Early Vocabulary Development via Maternal Speech. *Child Development.* 74(5), 1368-1378.

Hoff, E., (2006). How social contexts support and shape language development. *Developmental Review*. 26(1): 55-88.

Holland, C. (2018). Close the Gap 2018 *A ten-year review: the Closing the Gap Strategy and Recommendations for a Reset*. Closing the Gap Campaign Steering Committee for Indigenous Health Equality. Oxfam Australia.

Holtz, C.A., Carrasco J.M., Mattek, R.J., and Robert, A.F. (2009). Behavior Problems in Toddlers with and Without Developmental Delays: Comparison of Treatment Outcomes, *Child and Family Behavior Therapy*, 31(4): 292-311. DOI:10.1080/07317100903311018.

Holtz, C.A., Fox, R.A., and Meurer, J.R. (2015). Incidence of Behavior Problems in Toddlers and Preschool Children from Families Living in Poverty. The Journal of Psychology, 149(2): 161-174, DOI: 10.1080/00223980.2013.853020.

Horwitz, S.M., Irwin, J.R., Briggs-Gowan, M.J., Heenan, J.M.B, Mendoza, J., and Carter, A.S. (2003). Language Delay in a Community Cohort of Young Children. Child and Adolescent Psychiatry. 42(8): 932-940.

HREOC (1997) *Bringing Them Home: Report of the National Inquiry into the Separation of Aboriginal and Torres Strait Islander Children from Their Families*. Human Rights and Equal Opportunities Commission.

Hughes, R.C., Rycus, J.S., Saunders-Adams, S.M., Hughes, L.K. and Hughes, K.N. (2013). *Issues in Differential Response.* Research on Social Work Practice 23(5) 493-520.

Hungerford, G.M., Garcia, D., and Bagner, D.M. (2015). Psychometric Evaluation of the Brief Infant-Toddler Social and Emotional Assessment (BITSEA) in a Predominately Hispanic, Low-Income Sample. *Psychopathology and Behavioral Assessment*. 37: 493–503.

Hunter, S. V. (2008). *Child maltreatment in remote Aboriginal communities and the Northern Territory Emergency Response: A complex issue.* Australian Social Work, 61(4), 372–388.

Jacobs, M.D. (2006) *Indian boarding schools in comparative perspective: The removal of Indigenous children in the United States and Australia 1880-1940*. Faculty Publications, Department of History, University of Nebraska, Lincoln.

Jones A.S. (2015). *Effective Implementation Strategies of Differential Response in Child Welfare: A Comparative Case Analysis.* Journal of Public Child Welfare. 9(5), 528-550.

JSCCCYP (2020). *From Words To Action: Fulfilling the obligation to be child safe.* Inquiry into the Monitoring and Enforcing of Child Safe Standards 2020, Joint Standing Committee on the Commissioner for Children and Young People WA, Parliament of Western Australia, Perth.

Karabekiroglu, K., Briggs-Gowan, M.J., and Carter, A.S. (2010). The clinical validity and reliability of the Brief Infant–Toddler Social and Emotional Assessment (BITSEA). 33(4): 503-509.

Kings Fund (2013). *King's Fund. Experience-Based Co-design Toolkit*. London, United Kingdom. www.kingsfund.org.uk

Kolomeyer, E., Renk, K., Cunningham, A., Lowell, A., and Khan, M. (2016). Mother's Adverse Childhood Experiences and Negative Parenting Behaviours. *Zero to Three*. 37(1): 5-12.

Kruizinga, I., Jansen, W., Carter, A.S., and Raat, H. (2011). Evaluation of an early detection tool for social-emotional and behavioral problems in toddlers: The Brief Infant Toddler Social and Emotional Assessment - A cluster randomized trial. *BMC Public Health*. 2011, 11: 1-6.

Lajimodiere, D.K. (2014). *American Indian Boarding Schools in the United States: A Brief History and Legacy*. In Indigenous Peoples' Access to Justice, Including Truth And Reconciliation Processes (book) Columbia University, USA.

Liu, J. (2004). Childhood Externalizing Behavior: Theory and Implications. *Child and Adolescent Psychiatric Nursing*. 17(3): 93-103.

Lonne, B., Harries, M., and Lantz, S. (2013). *Workforce development: A pathway to reforming child protection systems in Australia.* British Journal of Social Work, 43(8), 1630–1648.

MacArthur-Bates CDI. (2020). Retrieved from https://mb-cdi.stanford.edu/

Maclean, M.J., Taylor, C.L. and O'Donnell, M. (2015). *Pre-existing adversity, level of child protection involvement, and school attendance predict educational outcomes in a longitudinal study*. Child Abuse & Neglect (51) 120-131.

Maclean, M.J., Taylor, C.L. and O'Donnell, M. (2017). *Relationship between out-of-home care placement history characteristics and educational achievement: A population level linked data study*, Child Abuse & Neglect, 70, 146-159.

Maddison, S. (2019). The Colonial Fantasy: Why white Australia can't solve black problems. Allen & Unwin, Melbourne.

Malvaso, C.G., Delfabbro, P.H. and Day, A. (2017). *Child maltreatment and criminal convictions in youth: The role of gender, ethnicity and placement experiences in an Australian population.* Children and Youth Services Review 73 57-65.

Markham, F. & and Biddle, N. (2018) 'Income, poverty and inequality,' *2016 Census Paper No. 2*, Centre for Aboriginal Economic Policy Research, Australian National University

Marmot, M., Friel, S., Bell, R., Houweling, T.A.J. & Taylor, S. (2008). *Closing the gap in a generation: health equity through action on the social determinants of health*. The Lancet, 372, 1661-69.

McClelland, M.M., Morrison, F.J., and Holmes, D.L. (2000). Children at Risk for Early Academic Problems: The Role of Learning-Related Social Skills. *Early Childhood Research Quarterly*, 15(3): 307–329.

Mendes, P. (2007). *A Structural Analysis of Young People Leaving State Care*. Communities, Children and Families Australia, 3(1), 68-78.

Mendes, P., Johnson, G. and Moslehuddin, B. (2011). *Effectively preparing young people to transition from out-of-home care: An examination of three recent Australian studies*. Family Matters, 89, 61-70.

Milloy, J. S. (1999). *A national crime: The Canadian government and the residential school system, 1879 to 1986*. Winnipeg: University of Manitoba Press

Monks, H. (2017) 'The impact of poverty on the developing child', *CoLab Evidence Report*, Telethon Kids Institute, colab.telethonkids.org.au/resources/

Moslehuddin, B. (2012). *Transitioning from the state care system: The impacts of in-care experiences on the post-care outcomes for young people leaving state care.* Developing Practice: The Child, Youth and Family Work Journal, 33, 35-43.

NACCHO (2012). *National guide to a preventive health assessment for Aboriginal and Torres Strait Islander people*. National Aboriginal Community Controlled Health Organisations and The Royal Australian College of General Practitioners, Melbourne. naccho.org.au

National Scientific Council of the Developing Child, Harvard University. (2012). Establishing a Level Foundation for Life: Mental Health Begins in Early Childhood. Working Paper 6. Center on the Developing Child, Harvard University.

Nett, J. C. and Spratt, T. (2012). *Child protection systems: an international comparison of 'good practice examples' of five countries (Australia, Germany, Finland, Sweden, United Kingdom) with recommendations for Switzerland.* The Swiss Project Fund for Child Protection.

O'Donnell, M., Nassar, N., Leonard, H., Jacoby, P., Mathews, R., Patterson, Y., & Stanley, F. (2010). *Characteristics of non-Aboriginal and Aboriginal children and families with substantiated child maltreatment: A population-based study.* International Journal of Epidemiology, 39(3), 921–928.

O'Donnell, M., Nassar, N., Leonard, H., Mathews, R., Patterson, Y., & Stanley, F. (2010a). *Monitoring child abuse and neglect at a population level: Patterns of hospital admissions for maltreatment and assault,* Child Abuse & Neglect, 34 (11) 823-832.

O'Donnell, M., Maclean, M., Sims, S., Brownell, M., Ekuma, O. and Gilbert, R. (2016) *Entering out-of-home care during childhood: Cumulative incidence study in Canada and Australia*, Child Abuse & Neglect, 59, 78-87.

Parton, N. & Mathews, R. (2001). New directions in child protection and family support in Western Australia: A policy initiative to refocus child welfare practice. Child and Family Social Work, 6 (2). pp. 97-113.

PM&C (2018). *Closing the Gap Prime Minister's Report 2018.* Australian Government. Department of Prime Minister and Cabinet. Canberra.

Priddis, L.E., Matacz, R.A., Kiely, D., Bayes, S., Barratt-Pugh, C., Pooley, J.A., Lauren, C., Thornton, J., Fitzgerald, H.E. (2018), Better Together: Supporting Perinatal and Infant Mental Health Services.

Prime Minister and Cabinet NZ (2020) Reducing Child Poverty. Child poverty education and wellbeing legislation, child poverty measures, targets and indicators. See https://dpmc.govt.nz/our-programmes/reducing-child-poverty

Productivity Commission (2020). Report on Government Services 2020, Part F, Section 16, Child protection services.

RCIADC (1991). *Royal Commission into Aboriginal Deaths in Custody, National Report*, 5 vols, Australian Government Publishing Service, Canberra, 1991. Also available at http://www.austlii.edu.au/au/other/IndigLRes/rciadic/.

RCIRCSA (2018). *A Safer Future for Children: Report of the Royal Commission into Institutional responses to Child Sexual Abuse*. The Royal Commission into Institutional Responses to Child Sexual Abuse, Sydney.

Roberts, R., O'Connor, T., Dunn, J., Golding, J. (2004). The effects of child sexual abuse in later family life; mental health, parenting and adjustment of offspring. *Child Abuse and Neglect* 28: 525–545.

Rosenblum, K. L., Dayton, C. J., & Muzik, M. (2009). Infant social and emotional development: Emerging competence in a relational context. In C. H. Zeanah, Jr. (Ed.), Handbook of infant mental health (p. 80–103). The Guilford Press.

Rubin, K. H., Burgess, K. B., Dwyer, K. M., & Hastings, P. D. (2003). Predicting preschoolers' externalizing behaviors from toddler temperament, conflict, and maternal negativity. DEVELOPMENTAL PSYCHOLOGY, 39(1), 164–176. https://doi.org/10.1037/0012-1649.39.1.164.

Sawyer, A., Gialamas A., Pearce A., Sawyer M.G., Lynch, J. Five by Five: A Supporting Systems Framework for Child Health and Development. *School of Population Health,* University of Adelaide. 2014.

Steering Committee for the Review of Government Service Provision, Overcoming Indigenous Disadvantage 2016.

Senate Community Affairs References Committee (2009). Lost Innocents and Forgotten Australians Revisited. Report on the progress with the implementation of the recommendations of the Lost Innocents and Forgotten Australians Reports.

Senate Standing Committee of Community Affairs (2001). Lost Innocents: Righting the Record - Report on child migration.

Senate Standing Committee of Community Affairs (2004) Forgotten Australians: A report on Australians who experienced institutional or out-of-home care as children.

Shepherd, C., Li, J., Mitrou, F. and Zubrick, S. (2012), 'Socioeconomic disparities in the mental health of Indigenous children in Western Australia', BMC Public Health, 12: 756.

Sinha, V., Trocme´, N., Blackstock, C., MacLaurin, B., & Fallon, B. (2011). *Understanding the overrepresentation of First Nations children in Canada's Child Welfare System*. In K. Kufeldt & B. McKenzie (Eds.), Connecting research, policy, and practice (2nd ed., pp. 307 – 322). Waterloo, Canada: Wilfred Laurier University Press.

Sinha, V., Trocmé, N., Fallon, B., & MacLaurin, B. (2013). *Understanding the investigation-stage overrepresentation of First Nations children in the child welfare system: an analysis of the First Nations component of the Canadian Incidence Study of Reported Child Abuse and Neglect 2008*. Child Abuse & Neglect, 37 (10), 821–831.

SNAICC (2013). *Developing capacity through partnerships: A promising model for capacity building partnerships between Aboriginal and Torres Strait Islander services and non-Indigenous services*. Secretariat of National Aboriginal and Islander Child Care. www.snaicc.org.au

SNAICC (2016). The Family Matters Report 2016. Measuring trends to turn the tide on the over-representation of Aboriginal and Torres Strait Islander child safety and removal. Secretariat of National Aboriginal and Islander Child Care. www.snaicc.org.au

Tilbury, C. (2009). *The over-representation of Indigenous children in the Australian child welfare system*. International Journal of Social Welfare, 18 (1), 57-64.

Tilbury, C. (2015). *Moving to Prevention research report: Intensive family support services for Aboriginal and Torres Strait Islander children*. Secretariat of National Aboriginal and Islander Child Care and Monash University. www.snaicc.org.au

TRC (2012). *They Came for the Children: Canada, Aboriginal Peoples and Residential Schools.* The Truth and Reconciliation Commission of Canada, Manitoba.

Treat, A.E, Morris A.S, Williamson, Hays-Grudo, J, and Laurin D. (2019). Adverse childhood experiences, parenting, and child executive function. *Early Child Development and Care*, 189:6, 926-937, DOI:10.1080/03004430.2017.1353978.

Trocmé, N., MacLaurin, B., Fallon, B., Daciuk, J., Billingsley, D., Tourigny, M., Mayer, M., Wright, J., Barter, K., Burford, G., Hornick, J., Sullivan, R., & McKenzie, B. (2001). *The Canadian Incidence Study of Reported Child Abuse and Neglect: Final report.* Ottawa, Ontario: Minister of Public Works and Government Services Canada.

Trocmé, N., Knoke, D., & Blackstock, C. (2004). *Pathways to the overrepresentation of Aboriginal children in Canada's child welfare system.* Social Service Review, 74(4), 577–600.

Trocmé, N., Fallon, B., MacLaurin, B., Daciuk, J., Felstiner, C., Black, T., Tonmyr, L., Blackstock, C., Barter, K., Turcotte, D., & Cloutier, R. (2005). *Canadian Incidence Study of Reported Child Abuse and Neglect, 2003: Major findings.* Ottawa: Minister of Public Works and Government Services Canada.

Trocmé, N., Fallon, B., MacLaurin, B., Sinha, V., Black, T., Fast, E., Felstiner, C., Hélie, S., Turcotte, D., Weightman, P., Douglas, J., & Holroyd, J. (2010). *Chapter 5: Characteristics of children and families. In PHAC (Ed.), Canadian Incidence Study of Reported Child Abuse, 2008: Major findings* (Cat: HP5-1/2008E, pp. 36–43). Ottawa: Public Health Agency of Canada.

Valentine, k. and Katz, I. (2015). How early is early intervention and who should get it? *Contested meanings in determining thresholds for intervention*. Children and Youth Services Review 55, 121-127.

van der Kolk, BA (2007). *The developmental impact of childhood trauma*. In: Kirmayer LJ, Lemelson R & Barad M (eds). Understanding trauma: integrating biological, clinical and cultural perspectives. New York: Cambridge University Press.

WACOSS (2016). *Discussion Paper: Co-design Principles to deliver community services in partnership in WA*. Western Australian Council of Social Service, September 2016. Co-design toolkit. www.wacoss.org.au

WACOSS (2019) *Partnering with Aboriginal Community Controlled Organisations to deliver trusted services with stronger outcomes for Aboriginal people*. West Australian Council of Social Service and the Noongar Family Safety and Wellbeing Council.

WACOSS (2020) Submission to the Inquiry into the Children and Community Services Act 2004. Joint Standing Committee on Legislation, Parliament of Western Australia.

Warren, D, Daraganova, G & O'Connor, M. (2017). Preschool and children's readiness for school. LSAC Annual Statistical Report 2017, Australian Institute of Family Studies (AIFS).

Waters, E., and Cummings, E.M. (2000). A Secure Base from Which to Explore Close Relationships. Child Development, 71(1): 164-172: https://doi.org/10.1111/1467-8624.00130.

West, M. O., and Prinz, R. J. (1987). Parental alcoholism and childhood psychopathology. PSYCHOLOGICAL BULLETIN, 102(2), 204–218. https://doi.org/10.1037/0033-2909.102.2.204.

Western Australian Commissioner for Children and Young People. (2020). Age Group 0 to 5 years: Mental Health. Retrieved from https://www.ccyp.wa.gov.au/our-work/indicators-of-wellbeing/age-group-0-to-5-years/mental-health/

Williamson, A., McElduff, P., Dadds, M., D'Este, C., Redman, S., Raphael, B., Daniels, J., & Eades, S. (2014), 'The construct validity of the Strengths and Difficulties Questionnaire for Aboriginal children living in urban New South Wales, Australia', *Australian Psychologist*, 49, 163-170.

Wright, K., Swain, S., and Sköld, J. (2017). The Age of Inquiry: A global mapping of institutional abuse inquiries. Melbourne: La Trobe University. Online resource http://doi.org/10.4225/22/591e1e3a36139

Yap, M. and Yu, E, (2016), *Community wellbeing from the ground up: A Yawuru example*, BCEC Research Report 3/16, Bankwest Curtin Economics Centre, Perth.

Zubrick, S. R., Lawrence, D., De Maio, J. & Biddle, N. (2006), Testing the reliability of a measure of Aboriginal children's mental health: an analysis based on the Western Australian Aboriginal Child Health Survey, ABS Catalogue No. 1351.0.55.011, Australian Bureau of Statistics, Canberra.

Zubrick SR, Lawrence DM, Silburn SR, Blair E, Milroy H, Wilkes T, Eades S, D'Antoine H, Read A, Ishiguchi P, Doyle S. (2004) *The Western Australian Aboriginal Child Health Survey: The Health of Aboriginal Children and Young People.* Telethon Institute for Child Health Research, Perth.

Zubrick, S.R, Taylor, C.L., Rice, M.L, and Slegers, D.W. (2007). Late Language Emergence at 24 Months: An Epidemiological Study of Prevalence, Predictors, and Covariates. *Journal of Speech, Language & Hearing Research*. 50(6): 1562-1592.

Disclaimer

Authorised Use

Bankwest Curtin Economics Centre Focus on Western Australia Report Series

ISBN: 9781925083842

Contact

Bankwest Curtin Economics Centre
Tel: +61 8 9266 2873
Email: bcec@curtin.edu.au

bcec.edu.au