#ssiinsights

Stronger starts, brighter futures:

Exploring trends in the early development of children from culturally and linguistically diverse backgrounds in Australia

Occasional Paper
Number 3
March 2021

SSI
settlementservices
international

We acknowledge the traditional custodians of Australia's land and waterways. We pay our respects to elders, past, present and emerging, and commit ourselves to a future with reconciliation and renewal at its heart.

Stronger starts, brighter futures:

Exploring trends in the early development of children from culturally and linguistically diverse backgrounds in Australia

Hussain Rajwani
Ingrid Culos
Tadgh McMahon

The analyses of the Australian Early Development Census presented in this report were conducted by the Child Health, Development and Education Team at Telethon Kids Institute, South Australia. Settlement Services International led the development of the research questions and commissioned the Telethon Kids Institute to carry out and report on the analyses. Settlement Services International led the development of the report with support from the Telethon Kids Institute.

Suggested citation:

Rajwani, H., Culos, I., & McMahon, T. (2021). *Stronger starts, brighter futures: Exploring trends in the early development of children from culturally and linguistically diverse backgrounds in Australia.* Settlement Services International.

Photographs pages 1,4 & 54 • Simon Scott Photo

Contents

6 Key messages

9 Key Findings – at a glance

10 Executive Summary

12 Background

19 Research methods

19 Data sources: About the AEDC

22 Research questions

24 Findings at a national level

24 Trends in the early development of children from CALD backgrounds across Australia

29 Trends in ECEC attendance among children from CALD backgrounds across Australia

35 The relationship between ECEC attendance and early development outcomes among children from CALD backgrounds across Australia

40 Estimates of young children from CALD backgrounds with developmental vulnerabilities across Australia

42 Findings at a state level: NSW, QLD and VIC

42 Trends in the early development of children from CALD backgrounds in NSW, QLD, VIC

47 Trends in ECEC attendance among children from CALD backgrounds in NSW, QLD, VIC

50 The relationship between ECEC attendance and early development outcomes among children from CALD backgrounds in NSW, QLD, VIC

53 Estimates of young children from CALD backgrounds with developmental vulnerabilities in NSW, QLD, VIC

55 Conclusion

56 Links to Appendices

57 References

Key messages

Early childhood education in the pre-school years is critical to a strong start in life and Australian children starting school are becoming more culturally diverse

- There is compelling evidence of the benefits of early childhood education and care (ECEC) (e.g. preschool, day-care and playgroups) to reduce children's developmental vulnerabilities, facilitate successful transition to school, and promote positive outcomes throughout the life course.
- The demographic reality of increasing cultural diversity in Australia is reflected in early childhood with more than 24 per cent of children enrolled in their first year of full-time school in 2018 being from a culturally and linguistically diverse (CALD) background (up from 17 per cent in 2009).
- However, research on the early developmental trajectories of children from CALD backgrounds in Australia is limited.
- This research uses data from the Australian Early Development Census (AEDC) to address this gap and presents analyses of data from this nationwide census of children starting full-time school over four time points 2009, 2012, 2015 and 2018. We examine national data and data for the three most culturally diverse jurisdictions: New South Wales, Queensland and Victoria.

Children from culturally diverse backgrounds in Australia are less likely to participate in early childhood education and more likely to be developmentally vulnerable when they start school

- There are clear gaps in ECEC attendance between children from CALD and non-CALD backgrounds at a national level:
  - the percentage of children from CALD backgrounds who do not attend preschool (the most common type of ECEC in Australia) is almost double that of non-CALD children;
  - a similar result is seen in attendance at playgroups and in access to early professional support such as speech therapy, occupational therapy or disability support.
- Children from CALD backgrounds are more likely to be developmentally vulnerable at school entry than non-CALD children, as measured by the AEDC. This was consistent across all four national cohorts of children from 2009 to 2018.
- Encouragingly, the gap in developmental vulnerability between children from CALD and non-CALD backgrounds has narrowed over time.
- However, the number of children from CALD backgrounds who are developmentally vulnerable continues to increase in line with increasing cultural diversity in the Australian population.
- The impact of these differences in participation rates is evident in the developmental trajectories of children who attend preschool: 1 in 5 children from CALD backgrounds who attend preschool are developmentally vulnerable compared to 1 in 3 children who do not attend preschool.
- Overall, children from CALD backgrounds in Australia who do not attend any type of early childhood education and care are 1.8 times more likely to be developmentally vulnerable, compared to those who attend.
- While the analysis of AEDC data showed some variations between the national level and New South Wales, Queensland and Victoria, the overall trends held true.

Lifting attendance among children from CALD backgrounds in early childhood education is feasible and worthwhile

- Taken together these findings align with the literature, which highlights the multiple barriers that CALD families face in accessing quality early childhood education and care.
- The analysis of the AEDC in this report quantifies the link between lack of access to ECEC and poorer developmental outcomes for increasing numbers of children from CALD backgrounds at school entry, jeopardising their transition to school and outcomes throughout the life course.
- In addition, modelling indicates that the positive social outcomes of participation in early childhood education generate a measurable and significant economic benefit to Australia.
- This research indicates that there are many CALD children who, together with their families, require a suite of universal and targeted responses to increase their participation in learning and development in the pre-school years.
- We know that strong early beginnings predict positive long-term trajectories of children. Addressing the service gaps evident in this analysis of trends in AEDC data will help to reduce developmental disparities between children from CALD and non-CALD backgrounds and secure Australia's social, cultural and economic future.

Children from CALD backgrounds are more likely to be developmentally vulnerable at school entry than non-CALD children

Key messages

Recommendations

- Governments and policy makers should ensure that planning and funding for early childhood education reflects the increasing numbers of CALD families needing access to child and family support in the early years.
- The Australian Government should consult with CALD communities and relevant stakeholders and invest in measures such as those recommended by the Productivity Commission in 2015 to lift participation rates for children from CALD backgrounds in early education and care.
- Specifically, the Australian Government should examine the effectiveness of inclusion initiatives, managed by the Department of Education, Skills and Employment and child and parenting services funded by the Department of Social Services, to address disparities in access to early childhood education and care, including early professional support for children from CALD backgrounds.
- The New South Wales, Queensland and Victorian governments should ensure that early intervention programs (including place-based initiatives) designed to improve child development and wellbeing have the capacity and capability to address the increasing numbers of developmentally vulnerable children from CALD backgrounds in their jurisdictions.
- Early childhood education providers and government and non-government providers of mainstream child and family services should work to reduce the barriers to early childhood education faced by families from CALD backgrounds through targeted initiatives that meet their needs and preferences. This could include enhancing the cultural responsiveness of providers, using early childhood education as a springboard to support families from CALD backgrounds and expand their social connections, and raising awareness about the benefits of early childhood education among CALD communities.
- Trends in AEDC data in this report confirm that CALD families face barriers to early childhood education, pointing to the need for an expansion of targeted initiatives, delivered by organisations with culturally responsive capabilities, to leverage ‘soft-entry’ points to promote access.
- Settlement services working with newly-arrived migrants and refugees should continue to promote access to early childhood education (e.g. preschool, day-care, playgroups) that matches the preferences and needs of newly-arrived families given the compelling evidence of the benefits of attendance and positive developmental outcomes for children.

Key Findings – at a glance

Demographic trends in early childhood across Australia	2009	2018
The number and percentage of children from CALD backgrounds	45,120 (17%)	74,990 (24%)

Trends in the early development of children from CALD backgrounds across Australia	CALD	Non-CALD
The proportion of children who are developmentally vulnerable on one or more domains	29% (2009) 23% (2018)	21% (2009) 20% (2018)
The proportion of children who are developmentally vulnerable on two or more domains	15% (2009) 11% (2018)	11% (2009) 10% (2018)
The number of children who are developmentally vulnerable on one or more domains	13,086 (2009) 17,446 (2018)	44,950 (2009) 46,002 (2018)
The number of children who are developmentally vulnerable on two or more domains	6,600 (2009) 8,576 (2018)	22,627 (2009) 23,858 (2018)

Trends in ECEC attendance among children across Australia	CALD	Non-CALD
The proportion of children who attended preschool	64% (2009) 78% (2018)	78% (2009) 87% (2018)
The proportion of children who attended day-care	31% (2009) 30% (2018)	33% (2009) 33% (2018)
The proportion of children who attended an early intervention program	5% (2009) 5% (2018)	8% (2009) 10% (2018)
The proportion of children who attended any type of ECEC	77% (2009) 82% (2018)	86% (2009) 91% (2018)

Relationship between ECEC and developmental vulnerability among children across Australia (2018 AEDC)	CALD		Non-CALD	
The proportion of developmental vulnerability on one or more domains among children who attended any ECEC	Attended 22%	Did not attend 34%	Attended 20%	Did not attend 32%
The proportion of developmental vulnerability on two or more domains among children who attended any ECEC	Attended 11%	Did not attend 18%	Attended 10%	Did not attend 18%
The increased likelihood of developmental vulnerability (one or more domains) among children who did not attend any ECEC, relative to those who attended	+1.81		+ 1.93	

Estimates of children from CALD backgrounds in Australia	
Number of children from CALD backgrounds aged 0-4 years in the Australian population (ABS Census 2016)	355,941
The number and proportion of children from CALD backgrounds aged 0-4 years with developmental vulnerabilities in the Australian population (extrapolated from 2016 ABS Census and 2018 AEDC)	82,934 (23%)

Executive Summary

A stable environment and nurturing relationships with family, neighbours and communities are critical for childhood development and it is well established that the early years of a child's life can have lasting impacts throughout the life course. Consequently, improving child development tends to focus on early intervention in the pre-school years and adopts a public health approach to shift the development trajectory of the entire population of children towards the healthy end of the development continuum.

International evidence indicates that children from ethnic and minority backgrounds can be more developmentally vulnerable. Poverty is one of the main drivers of children's vulnerability and, in many countries, people from ethnic and minority backgrounds tend to have lower socio-economic status. In Australia, there is also some evidence of higher rates of poverty among migrants. In addition, settlement and integration is a complex process of mutual adaptation between migrants and the host society, which can result in children and families experiencing a range of intersectional issues that can exacerbate vulnerabilities.

Despite increasing cultural diversity in Australia, research on the early developmental trajectories of children from culturally and linguistically diverse (CALD) backgrounds is limited. This report presents analyses of data from a nationwide census of children starting full-time school, the Australian Early Development Census (AEDC). This report draws on analyses of AEDC data to examine how children from CALD backgrounds are faring in comparison to other children in Australia in terms of their development, their participation in ECEC and the relationship between participation in ECEC and developmental vulnerabilities.

The benefits of access to quality Early Childhood Education and Care (ECEC) (e.g. preschool[1], day-care and playgroups) for children's development are undisputed with measurable benefits through childhood, adolescence and into adulthood. Modelling indicates that these benefits from investing in early childhood education generate a strong economic return. A mix of universal and targeted interventions – a proportionate universal approach – throughout the early years is most effective in promoting healthy development. These include widely available access to preschool and day-care to targeted interventions that provide other access options, such as supported playgroups which can provide a 'soft-entry' for parents and children from CALD backgrounds.

However, CALD families often face barriers to access or engage with ECEC, pointing to the need for ECEC programs and initiatives to be more culturally responsive. Developing culturally responsive practice in the early childhood education sector could deliver benefits to rates of participation among children from CALD backgrounds. However, to be effective, this capacity building should occur at multiple levels: the systems level, the professional level, at the level of the provider and at the level of the individual worker.

The AEDC is a national census completed every three years by teachers based on their knowledge and observations of children in their first year of full-time school. Data was available for 2009, 2012, 2015 and 2018 cohorts of children. The AEDC was first completed for over 260,000 children in 2009, and most recently for almost 310,000 children across Australia in 2018. The AEDC measures child development across five domains and two summary indicators, providing information on whether children are developmentally vulnerable, developmentally at risk or developmentally on track. AEDC data also provides information regarding children's participation across five types of ECEC: preschool, day-care, playgroups, early intervention support and other forms of non-parental care. The data analysis was carried out at a national level and separately for the three most culturally diverse jurisdictions: New South Wales, Queensland and Victoria.

The findings show that the number and percentage of children from CALD backgrounds commencing full-time school in Australia has increased over time, in line with increasing cultural diversity in Australia's population overall. Between 2009 and 2018 the percentage of children from CALD backgrounds increased from 17 per cent to 24 per cent. In the same period the number of children from CALD

1 The terminology for different types of early childhood education varies across States and Territories. For an explanation of differences see: https://raisingchildren.net.au/preschoolers/play-learning/preschool/preschool-in-your-state

backgrounds grew from just over 45,000 in 2009 to almost 75,000 children in 2018.

Children from CALD backgrounds were more likely to be developmentally vulnerable than those from non-CALD backgrounds. This was against a trend of decreasing developmental vulnerability among children overall from 2009 to 2018. Encouragingly, the gap between CALD and non-CALD children who were developmentally vulnerable on one or more domains has narrowed from just over 8 per cent in 2009 to just over 3 per cent in 2018.

However, the number of CALD children who were developmentally vulnerable on one or more domains continued to increase, from just over 13,000 in 2009 to almost 17,500 in 2018, reflecting increasing cultural diversity in the overall Australian population. The report estimates, using an extrapolation of 2016 ABS census and 2018 AEDC data, that there are over 80,000 children from CALD backgrounds who are developmentally vulnerable in Australia.

The largest difference between children from CALD backgrounds and other children across the four time points was in the domain of communications and general knowledge. This domain captures a range of skills and abilities, including a child's ability to listen and use language effectively in English, which is likely to have contributed to disparities in results.

Preschool is by far the most common type of ECEC for all children in Australia. Yet this analysis shows that the rate of children from CALD backgrounds not attending preschool was almost double that of non-CALD children (in 2018, 10% compared to 6%), while children from CALD backgrounds attended day-care at rates similar to other children.

Children from CALD backgrounds are about twice as likely not to access early intervention support such as speech therapy, occupational therapy or disability support compared to other children (in 2018, 5% compared to 10%) which indicates that CALD families are missing out on these early professional interventions.

A similar result was observed in CALD children's attendance at playgroups (in 2018, 9% compared to 15%). Attendance by CALD children at other types of ECEC – day-care and other forms of non-parental care – was also lower than that of non-CALD children.

The data shows that the overwhelming majority of children participate in some form of ECEC and that this participation has increased over time, while the gap in participation between CALD and non-CALD children has remained fairly constant (in 2018, 82% compared to 91%). That said, the rate of children from CALD backgrounds not attending any form of early childhood education and care was almost double that of children from non-CALD backgrounds (in 2018, 13% compared to 7%). This is despite the fact that the AEDC data confirmed that children who did not attend ECEC were at increased risk of developmental vulnerabilities.

The strongest relationship between participation in ECEC and early development was observed for children who attended preschool: 1 in 5 CALD children who attended preschool were developmentally vulnerable compared to 1 in 3 children who did not attend preschool.

In a statistical calculation of the 2018 AEDC data, CALD children who did not participate in any type of ECEC were 1.8 times more likely to be developmentally vulnerable, compared to CALD children who did attend. While the AEDC data showed some variations between national and NSW, QLD and VIC, the overall trends held true. A major difference was observed in large reductions in developmental vulnerability in QLD over time, particularly between 2009 and 2012, which are likely attributable to state-wide shifts in early childhood policy and service provision from 2007 onwards.

This analysis of the AEDC indicated that there are many CALD children who, together with their families, require services and support to strengthen their learning and development in their early pre-school years. We know from the evidence that these early beginnings predict long term trajectories of children. Addressing the gaps evident in this analysis of AEDC data will help to secure Australia's social, cultural and economic future.

Background

The response in Australia to improving childhood development is moving towards policies and programs that act early and work to enhance the holistic development of all children.

Families, neighbourhoods and communities are the cornerstone of safety and support for children's development. While a child's development is shaped through these interactions, the wider socio-economic, political and cultural context also have a key influence on early life trajectories (Brinkman, et al., 2013). Given the sensitivity of children to such a broad range of environmental factors, governments, researchers and practitioners are increasingly adopting a whole-of-population or public health approach to improve the development and quality of life of children (Higgins, 2015; Brinkman & Stanley, 2014).

Child development exists on a continuum (Higgins, 2015). The key to maximising the development of a child is to ensure that the right behaviours and environments are in place to promote development towards the positive end of the continuum (Higgins, 2015). Sensitive and responsive parent-child relationships as well as opportunities for stimulation play an important role in children's early development (Britto, et al., 2017; Marmot, 2010). A stable environment that supports a child's health, nutritional, emotional, social and developmental needs is crucial to promote healthy development (Goldfeld, et al., 2016; Britto et al, 2017). At the same time, consideration needs to be given to reduce inequalities stemming from the socio economic, cultural and political environment – all of which impact on healthy child development.

Early childhood has lasting impacts throughout the life course. Children with developmental vulnerabilities when starting school are more likely to demonstrate poor literacy and numeracy skills in later school years (Brinkman, et al., 2013). Early childhood education and care is crucial to ensure that children start school with the skills and capacities needed to maximise their learning years (Brinkman, et al., 2013). The economic impact of early childhood education in Australia shows a significant return on investment: for every dollar invested, Australia receives $2 back over a child's life (The Front Project and PwC, 2019).

Likewise, children who have experienced harm and neglect are more likely to demonstrate a range of difficulties later in life (Higgins, 2015; Brinkman et al, 2013). Accordingly, early intervention that addresses child neglect and harm is crucial to prevent long-term vulnerabilities in later life (Britto, et al., 2017), with investment in evidence-based early interventions generating significant savings for government and the community (SVA Consulting, 2019).

Programs and initiatives in early childhood are consistent with a public health approach because they shift the focus of human services from crisis responses to early identification and support. In doing so, they seek to ensure that the right behaviours and environments are in place during the early years of a child's life when interventions are likely to have a lasting impact. This involves working across a range of human services to provide multiple 'soft-entry' points that identify and address emerging vulnerabilities. At an environmental level, such an approach seeks to enable children to develop their potential while minimising the long-term social and economic costs (Family and Community Services, 2018). Promoting early childhood development requires coordinated multi-sector approaches and collaboration between health, education, government, community development and non-government agencies (Britto, et al., 2017; Brinkman, et al., 2013).

The international literature on the similarities and differences in the early developmental trajectories of children from ethnic and minority backgrounds provides a useful backdrop to the Australian context but has limitations.

It is unsurprising that poverty and the multiple financial and other constraints that flow from living in poverty – including access to health, nutrition, social and other supports – are the main drivers of increased vulnerabilities for early child development (Brinkman & Stanley, 2014) irrespective of the cultural and linguistic background or the country in which children live. Poverty can affect a child's development from pregnancy when maternal health is crucial to the time when caregivers seek access to early childhood education and throughout schooling and adolescence.

A comparison carried out across eight OECD countries found that, after accounting for income support and safety nets, there were higher poverty rates among children in immigrant families in Australia than among children born to Australian-born parents (Hernandez, 2014). The challenges faced by newly arrived immigrants may be exacerbated by the settlement and integration process. Integration and settlement in a new country is a complex process that has multiple dimensions and involves mutual adaptation between migrants and the host society in a two-way exchange (UK Home Office, 2019). Similarly, children from migrant backgrounds experience a range of intersectional challenges and opportunities stemming from cultural and socioeconomic factors that occur in the context of: "how they are treated by others in the broader [host] society" (Hernandez, 2014, p. 3159).

While this international evidence is a useful backdrop, given the complexity of the drivers of healthy child development and the vastly different contexts, an exploration of the evidence from Australia on children from culturally and linguistically diverse (CALD) backgrounds is required.

Early childhood has lasting impacts throughout the life course. Children with developmental vulnerabilities when starting school are more likely to demonstrate poor literacy and numeracy skills in later school years

Despite the demographic reality of a shift towards increasing cultural diversity in Australia, there is limited research on the developmental trajectories of children from CALD backgrounds.

Australia's growing cultural diversity is reflected in the fact that one in four people in Australia (26%) were born overseas with 40 per cent coming from China, India and other Asian countries (ABS, 2016). Second generation Australians under 40 and who have both parents born overseas are more likely to have parents of Asian ancestry (ABS, 2016). Further, in the most recent census 21 per cent of Australians spoke a language other than English at home (ABS, 2016). By international comparisons for the years 1999-2005, Australia, even then, had one of the highest proportions of children in the OECD with parents who are migrants (Hernandez, 2014).

Australia's CALD communities are not homogenous and represent a range of education levels, English proficiency, visa types, socioeconomic circumstances and home environments. Many of these factors have an impact on the development and later outcomes of a child. Based on AEDC data, children living in socioeconomically disadvantaged communities and children not proficient in English

are more likely to be developmentally vulnerable (Productivity Commission, 2014, p. 147).

Analyses of ABS data demonstrates that rates of poverty among migrants born in non-English speaking countries are almost double those born in a major English-speaking country and those born in Australia (Davidson, Bradbury, Hill, & Wong, 2020). Lower employment rates among migrants from non-English speaking countries are argued to contribute to this inequality. For example, in 2018, 83 per cent of all migrants from North West Europe were employed 5-10 years after arrival. This compares to 30 per cent of migrants from North Africa or the Middle East. Differences in employment prospects reflect a range of factors including access to labour market information and networks, discrimination in employment, qualifications and their recognition (Davidson, Bradbury, Hill, & Wong, 2020).

Despite the demographic shift towards greater cultural diversity in Australia, there is limited research on the developmental trajectory of children from CALD backgrounds with much of the existing research fragmentary and sporadic (Katz & Redmond, 2010).

Despite the demographic shift towards greater cultural diversity in Australia, there is limited research on the developmental trajectory of children from CALD backgrounds with much of the existing research fragmentary and sporadic

From the evidence base we can draw on some common themes around 'what works' to promote the early development of children from CALD backgrounds with a mix of universal and targeted interventions.

A mix of universal and targeted interventions – a proportionate universal approach – throughout the early years is most effective in promoting healthy child development. At the earliest stage, universal services include prenatal care and nurse home visits for immediate newborn care. In infancy and early childhood, interventions can include healthy home care, nutritional support and access to high quality early childhood care and education programs (Britto et al, 2016).

In addition, a targeted approach helps to meet the different needs of diverse families requiring different access points or more intensive supports. This approach also recognises the importance of culturally responsive approaches, for families from CALD backgrounds. Targeted initiatives such as supported playgroups, language support in the school environment and place-based initiatives are often cited as ways to support the development of children facing vulnerabilities. Disadvantaged children benefit most from quality programs and initiatives because, in their absence, they are likely to spend more time in less stimulating and supportive environments (Elango, et al., 2015). For example, supported playgroups are largely an Australian solution to complement other initiatives and have been found to be beneficial among a range of disadvantaged groups (Williams, et al., 2018). In essence, they can provide a 'soft-entry' for parents and children from CALD backgrounds to build trust in human services, blending lay and professional approaches to child care in Australia (Warr, et al., 2013). For children, playgroup attendance leads to better outcomes across a range of domains (Sincovich, et al., 2020). Greater engagement and playgroup attendance is a pathway to English language acquisition and social networks. Despite the benefits, disadvantaged children, including those from non-English speaking backgrounds, are less likely to attend playgroups (Sincovich, et al., 2020). For parents, supported playgroups provide social

support, enhance parenting skills and awareness, and link families to formal supports available in the community (Commerford & Robinson, 2016). Another targeted initiative is the language support provided in Australia in public schools for children with insufficient English entering the school system. Children of all ages have access to in-school language learning support (Abdul-Rida & Nauck, 2014), which is delivered in different ways by State and Territory education systems.

The knowledge that neighbourhoods play a critical role in child development has spawned numerous place-based initiatives. These initiatives are usually targeted to disadvantaged neighbourhoods, given the known relationship between low socio-economic status and child vulnerability, which in the Australian context can often include high proportions of migrants and refugees. For example, the Communities for Children initiative was a place-based initiative implemented in 45 locations across Australia. Its aim was to develop a range of localised solutions to address child disadvantage and a formal evaluation showed a positive impact in the short-term, including on children's development (Muir, et al., 2010).

Thus, the evidence points to a number of common themes to promote early development of children from CALD backgrounds. Key among these themes is the need for a mix of targeted and universal interventions. As families from CALD backgrounds are not homogenous, such interventions should seek to recognise the different needs and preferences of diverse children and families, including, for example, in-language support. Given the importance of a child's family and neighbourhood, interventions that support families and neighbourhoods as well as children have a greater impact as they enhance the environments in which children spend their early years and help connect families to broader support systems available in their local community.

The benefits of access to quality early years education on childhood development are undisputed. However, vulnerable CALD families often face barriers to accessing or engaging with early education.

Access to quality early childhood education centres and preschool positively influences the transition to school and helps develop social and cognitive skills and self-regulation of behaviour. In Australia, Early Childhood Education and Care (ECEC) is used to refer to formal and informal services that help children in the pre-school years. More broadly, access to quality early learning and care for children in the year prior to starting school provides immediate socialisation benefits for children, increases the likelihood of a successful transition into formal schooling and improves performance in standardised test results in the early years of primary school (Productivity Commission, 2014). Participation in ECEC also generates an economic dividend with benefits accruing from higher earnings and workforce participation, increased tax revenue and considerable savings in health, education and justice (The Front Project and PwC, 2019). Furthermore, early childhood education can also help identify developmental vulnerabilities in a timely manner and allow for a range of other interventions to address such vulnerabilities (Productivity Commission, 2014).

For children from disadvantaged backgrounds, including children from CALD backgrounds, evidence suggests that early childhood education improves confidence and develops social skills leading to a better start to schooling years (Melhuish, 2003) and better educational and employment pathways in future (Nores, et al., 2005). As noted above, children and families from disadvantaged backgrounds seem to benefit more from early childhood education when compared to their more advantaged peers (Goldfeld, et al., 2016).

Despite these benefits, children from non-English speaking backgrounds are less likely to attend early childhood education (Goldfeld, et al., 2016). According to the Productivity Commission, children from non-English speaking backgrounds are underrepresented in attendance at early childhood education services compared to the general

population. For example, in 2012, "a further 20,000 ECEC [Early Childhood Education and Care] places would be needed if children from NESB [non-English speaking backgrounds] enrolled in ECEC at a rate similar to their representation in the general population" (Productivity Commission, 2014, p. 521).

There are a range of barriers that many CALD families face in accessing or engaging with early childhood education. The stress of settling in a new country or adjusting to "new" ways of becoming self-sufficient can impact uptake of early childhood education services (Boit, et al., 2020). Migration-related stressors that can influence engagement with early childhood services include time and work demands, lack of transportation, limited English language skills, the reality of adapting to different cultural experiences and expectations, parents having multiple jobs or working non-standard hours (making it difficult to socially engage in interactive activities with their children), or coming from countries where oral communication is more common (Boit, et al., 2020), along with experiences of dislocation and trauma (Warr, et al., 2013).

Further, there is often a lack of understanding about early childhood education services. In the Australian context, research has highlighted what has been characterised as a "cycle of misunderstanding" between early educators and parents from CALD backgrounds that can hinder pathways to early childhood education (De Gioia, 2013), prompting the need for deeper engagement around the early childhood education curriculum with parents. According to some studies, while parents endorsed the pedagogy of learning through play, they felt that children did not receive sufficient "academic" training ahead of starting school (Patel & Agbenyega, 2013). Some parents also feel that their children became more distanced from their culture through the learning process (Patel & Agbenyega, 2013). A key component in language and literacy development involves parents socially engaging with their child in interactive home activities. However, migrant parents may not engage in such activities due to stressors arising from adjusting to their new environment (Boit, et al., 2020). Thus, issues around access to early childhood education services may require further engagement with CALD parents and greater inclusion of different cultural elements (Patel & Agbenyega, 2013; Boit, et al., 2020).

A lack of access to or engagement with early childhood education can lead to greater developmental vulnerabilities in children ahead of starting school. Access and engagement can be supported through considered policy responses.

Limited engagement with or access to early childhood education by children from CALD backgrounds means that not only are important opportunities to promote early development missed but also developmental vulnerabilities are less likely to be identified and addressed in the critical formative years. According to the Australian Early Development Census (AEDC), children from non-English speaking backgrounds are more likely to be developmentally vulnerable across all five domains of development, relative to children from English speaking backgrounds (Productivity Commission, 2014; Goldfeld, et al., 2016).

Early childhood education centres should seek to be more culturally responsive and adaptable. For example, CALD communities may use practices such as language brokering, storytelling and singing games. This demonstrates that parents understand the importance of providing young children with stimulation and the skills needed to succeed in school (Boit, et al., 2020). Early childhood education providers with an awareness of these cultural tools can integrate home learning with learning at early childhood education centres. Similarly, the emergence of cultural or language specific playgroups in Australia seeks to meet the preferences and address the cultural and language barriers of families from CALD backgrounds (Sincovich, et al., 2020).

Several studies demonstrate that an effective way of breaking down access barriers is for early childhood education services to assist the broader family, particularly migrant and refugee families' needs and aspirations. Cultural, language and socio-economic barriers influence access to early childhood education for families from CALD backgrounds (Woolfenden, et al., 2015). However, research has shown that playgroups and similar centres can be a source of social and emotional support for parents, particularly mothers (New, et al., 2015). Playgroups or early

learning providers that assist parents to acquire new skills, such as English language skills, have found that this has a positive impact on the child's overall wellbeing and readiness to learn (Targowska, et al., 2015). Supported playgroups have been effective in providing social support, enhancing parenting skills and awareness and linking families to formal supports available in the community (Commerford & Robinson, 2016). Despite the effectiveness of integrating early childhood education with broader family support, there is a reluctance to expand government funding for early childhood education to provide broader family support and services (Productivity Commission, 2014).

Cultural competency or culturally responsive practice in the early childhood education sector is another policy response that could deliver benefits for culturally diverse children (National Health and Medical Research Council, 2006). However, for such training to be effective, it should occur at four levels: the systems level, the professional level, at the level of the provider and at the level of the individual worker (National Health and Medical Research Council, 2006). While capacity building is often operationalised in terms of additional training at the individual worker level, such workers are often limited in their ability to effect change in the organisation where they are employed or in the service system in which they are based. As such, a cultural competency framework should inform both policy and practice. This should be supplemented by a bilingual and a culturally diverse workforce to bridge cultural differences. This could unlock the capacity of the migrant workforce through greater skills training and qualifications recognition.

The Australian Early Development Census (AEDC) allows for an examination of the multiple domains of child development across the entire population.

The AEDC is a nationwide census of early child development conducted once every three years for all children in their first year of full-time school using a teacher-completed tool that draws on their knowledge and observations of children. AEDC data are publicly available, providing information on the proportion of children who are developmentally vulnerable, developmentally at risk, and developmentally on track at the national, jurisdictional and community level.

Consistent with a public health approach, the AEDC enables population-level measurement, capturing development across domains and levels of ability, placing children on a continuum of development including both areas of strength and where further support is needed, rather than a focus on delay or deficit only (Mustard, 2007; Brinkman & Stanley, 2014).

Taken together, the AEDC enables investigation of the early development of children from CALD backgrounds at a population level, including identifying areas of children's early development that might require additional supports, as well as how ECEC participation (which in the AEDC includes preschool, day-care, playgroups and informal non-parental care) is working to support children from CALD backgrounds in the early years for the transition to school. First conducted in 2009 and then again in 2012, 2015 and 2018, four waves of AEDC data enable exploration of these trends in Australia throughout the last decade, working to strengthen the evidence base for early intervention initiatives and approaches to help ensure children from CALD backgrounds are supported to reach their developmental potential.

Research methods

Key points

- The Australian Early Development Census (AEDC) is completed by teachers for all children and measures a child's development in their first year of full-time school across five domains: Physical Health and Wellbeing, Social Competence, Emotional Maturity, Language and Cognitive Skills, and Communication Skills and General Knowledge.
- On each domain, children are classified into one of three categories: developmentally vulnerable, developmentally at risk, and developmentally on track. Additionally, two key summary indicators are used: whether children are vulnerable on one or more developmental domains, and whether children are vulnerable on two or more domains.
- The AEDC also collects data on children's access to ECEC including preschool, day-care, playgroups, early intervention support and other non-parental care.
- This study compared AEDC data for CALD and non-CALD children across all four AEDC cohorts: 2009, 2012, 2015 and 2018.

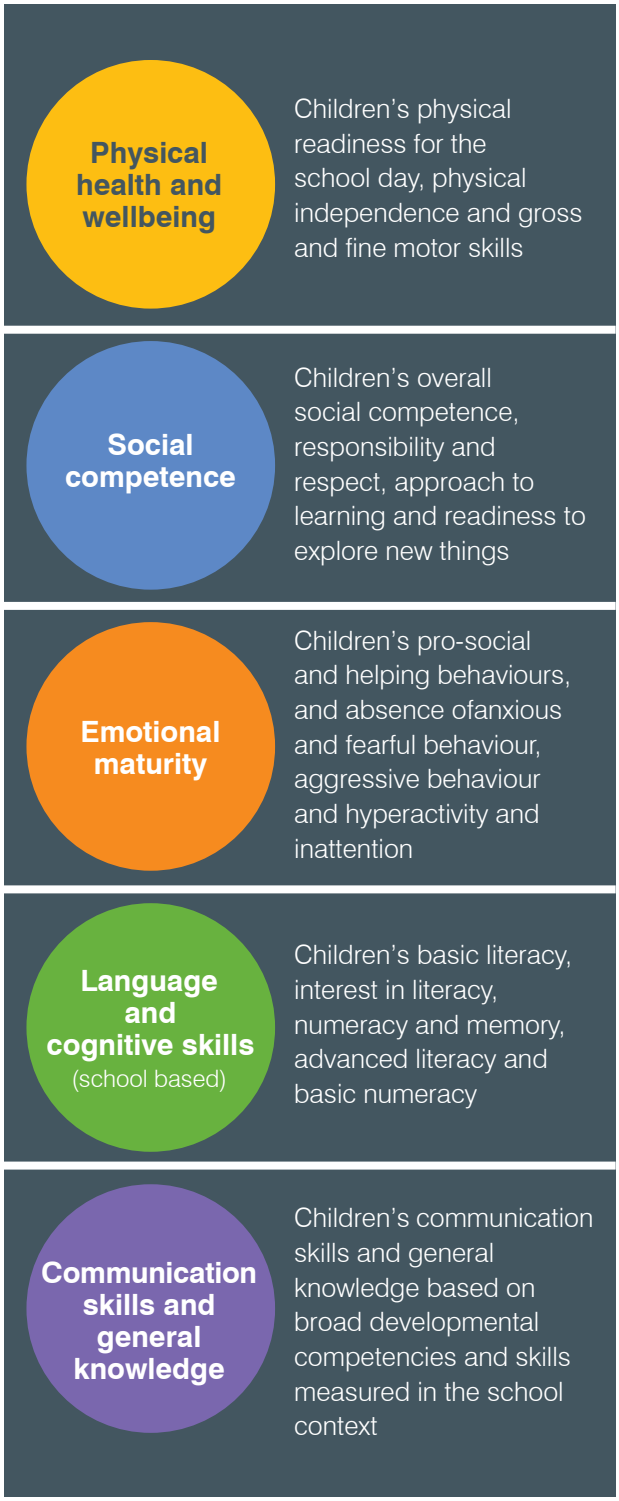
Different analyses were conducted to answer the six key research questions that are the focus of this report. Data sources utilised as well as analyses conducted are described below.

Data sources: About the AEDC

The Australian Early Development Census (AEDC) is the key data source used throughout this report. The AEDC is a nationwide census of early childhood development conducted once every three years for all children in their first year of full-time school. AEDC data are publicly available, providing information on the proportion of children who are developmentally vulnerable, developmentally at risk, and developmentally on track at the national, jurisdictional and community level.

The child development instrument used within the AEDC is an Australian adaptation of the Early Development Instrument (EDI) (Janus, 2007). The EDI is a teacher-completed instrument including approximately 100 items that measure development across five domains: Physical Health and Wellbeing, Social Competence, Emotional Maturity, Language and Cognitive Skills, and Communication Skills and General Knowledge (Brinkman, Gregory, Goldfeld, Lynch, & Hardy, 2014). Figure 1 provides a description of the skills and abilities each domain captures. Children receive a score between 0 and 10 on each domain, with higher scores indicative of better development. Children are then classified into one of three categories: developmentally vulnerable, developmentally at risk and developmentally on track. Additionally, there are two key summary indicators used within the AEDC that indicate whether children are vulnerable on one or more developmental domains and whether children are vulnerable on two or more domains.

Figure 1:
Developmental domains measured in the AEDC



In addition to responding to items regarding children's development, during the AEDC collection teachers are asked to provide contextual information about the children in their class, including children's education and care experiences before school. Specifically, teachers were asked if children:

- Attended a preschool/kindergarten program in the year before entering full-time school.
- Had been in day-care on a regular basis (full- or part-time centre-based or family day-care).
- Attended playgroup in the years before entering full-time school.
- Attended an early intervention program (including programs for speech/language; special school; disability services; occupational therapy; physiotherapy; hearing services; vision services; behaviour, anxiety, counselling, psychology services; or an early intervention program in any other capacity).
- Had been in any of the following forms of other non-parental care on a regular basis, including a grandparent, other relative, nanny, friend or neighbour.

Teachers could respond "yes", "no" or "don't know" to these questions and this information is used to measure ECEC attendance throughout this report. Further, children's demographic information, including their language background, is obtained from school administrative records and included into the AEDC dataset. This information was used to define children from a CALD background. Specifically, children were classified to be from a CALD background if they:

- Had a language background other than English (defined as speaking a language other than English at home, or speaking English at home but English is not their first language); and
- If the child's language other than English was not an Aboriginal Australian language.

In 2009, AEDC data were collected for 261,147 children, in 2012 data were collected for 289,973 children, in 2015 data were collected for 302,003 children, and in 2018 data were collected for 308,953 children, providing a rich population-wide data source over time. This information is used to explore trends in the early development of children from CALD backgrounds and the role of ECEC in supporting children in the early years for the transition to school.

In addition to AEDC data, publicly available population estimates from the most recent Australian Bureau of Statistics (ABS) Census, collected in 2016, were used to provide population estimates of children from CALD backgrounds, younger than those captured in the AEDC.

In 2009, AEDC data were collected for 261,147 children, in 2012 … for 289,973 children, in 2015 … for 302,003 children, and in 2018 … for 308,953 children, providing a rich population-wide data source over time

Research questions

Analyses sought to investigate the six research questions detailed below. Each research question was explored first for children across Australia overall and then separately for children from New South Wales, Queensland and Victoria.

Question 1.

What are the trends in the percentage of children from CALD backgrounds?

We explored the number and percentage of children from CALD backgrounds in their first year of full-time school across 2009, 2012, 2015 and 2018 AEDC cohorts. To provide an understanding of the most common cultural backgrounds of young children, we also identified the most frequent languages spoken by children from CALD backgrounds, as reported among the 2018 AEDC cohort.

Question 2.

What are the trends in the percentage of children from CALD backgrounds who are developmentally vulnerable?

To investigate the early developmental outcomes of children from CALD backgrounds, we calculated the number and percentage of children from CALD backgrounds who were classified to be developmentally vulnerable according to the two key AEDC summary indicators (i.e. developmentally vulnerable on one or more domains, and developmentally vulnerable on two or more domains). We compared these figures across the 2009, 2012, 2015 and 2018 AEDC cohorts to understand trends in development over time, separately for children from CALD and non-CALD backgrounds.

Question 3.

What are the key developmental vulnerabilities for children from CALD backgrounds?

We explored early developmental outcomes in more detail, by calculating the number and percentage of children from CALD backgrounds who were classified as developmentally vulnerable on each of the five AEDC domains (Physical Health and Wellbeing, Social Competence, Emotional Maturity, Language and Cognitive Skills, and Communication Skills and General Knowledge). Figures were compared across the 2009, 2012, 2015 and 2018 AEDC cohorts of children to explore trends in development over time, separately for children from CALD and non-CALD backgrounds.

Question 4.

What are the trends in the participation of children from CALD backgrounds in early childhood education and care (ECEC), compared to children from non-CALD backgrounds?

To investigate ECEC attendance, we explored the number and percentage of children who attended preschool, day-care, playgroup, an early intervention program and other non-parental care as reported by their teachers. We explored results separately for children from CALD and non-CALD backgrounds across the 2009, 2012, 2015 and 2018 AEDC cohorts to determine any disparities in ECEC participation over time.

Question 5.

Are there differences in developmental vulnerabilities between children from CALD backgrounds who did and did not attend ECEC, and how do these differences compare to that of children from non-CALD backgrounds?

We compared the prevalence of developmental vulnerability (on each of the five AEDC domains as well as two key summary indicators) among children who did and did not attend different forms of ECEC prior to full-time school, separately for children from CALD and non-CALD backgrounds. To explore the relationship between ECEC and children's early development, we investigated the association between attendance at different forms of ECEC prior to full-time school and children's development at school entry as measured by the AEDC. Specifically, we calculated the likelihood of a child being developmentally vulnerable on one or more domains based on if they did or did not attend ECEC. We explored results separately for children from CALD and non-CALD backgrounds to determine if there were any differences in the relationship between ECEC and early child development across groups. These analyses were conducted using data from the 2018 AEDC cohort.

Question 6.

Based on findings presented above, what is an estimate of the number of children aged 0-4 years from a CALD background who are likely to have developmental vulnerabilities?

Using population estimates from the 2016 ABS and the percentage of CALD children with developmental vulnerabilities as reported by the 2018 AEDC data, we estimated the number and percentage of children aged 0-4 years who are likely to have developmental vulnerabilities across each of the five AEDC domains as well as the two key summary indicators.

Findings at a national level

Trends in the early development of children from CALD backgrounds across Australia

Key points – General

- The number and percentage of children from CALD backgrounds in Australia has increased over time. For example, in 2009, children from CALD backgrounds represented 17.3 per cent of the cohort entering school (or 45,120 children) compared to 24.3 per cent in 2018 (or 74,990 children).
- The most prevalent languages spoken among children from CALD backgrounds in 2018 were Mandarin (11.9%), Arabic (10.6%), Vietnamese (6.0%) and Hindi (5.6%).
- Overall, while children from CALD backgrounds were more likely to be developmentally vulnerable when compared to their non-CALD peers, the gap in developmental outcomes between the two groups has been closing over time.
  - For example, in 2009, 29 per cent of children from CALD backgrounds were developmentally vulnerable on one or more domain compared to 20.8 per cent for children from nonCALD backgrounds (a difference of 8.2%).
  - In 2018, this number was 23.3 per cent for CALD children compared to 19.7 per cent for non-CALD children (a difference of 3.6%).
- However, the overall increase in the CALD population means that the absolute number of children from CALD backgrounds who were developmentally vulnerable increased from 13,086 children in 2009 to 17,446 children in 2018.
- Governments and policymakers should consider the implications for policy and service delivery of the increasing number of developmentally vulnerable children from CALD backgrounds.

Key points – AEDC domains

- The largest gap in developmental vulnerability between children with and without a CALD background was on the Communication Skills and General Knowledge domain.
- The Communication Skills and General Knowledge domain focuses on a child's ability to listen to and use the English language effectively.
  - In 2018, 13.5 per cent of children from a CALD background were developmentally vulnerable on this domain compared to 6 per cent of children from a non-CALD background. This gap has remained over time since 2009 (CALD: 18.3%; non-CALD: 6.7%).

Among children in their first year of school, both the number and percentage of children from CALD backgrounds has increased over time (see Table 1). In 2018, the most recent AEDC data collection, approximately 75,000 or 1 in 4 children were from a CALD background. These results are aligned with other data sources, such as the ABS census, and reflect Australia's growing cultural diversity. Table 2 highlights the 10 most frequent languages spoken at home among children from a CALD background in 2018, with Mandarin (11.9%) and Arabic (10.6%) reported to be most common.

Table 1.
CALD and non-CALD children in the Australian Early Development Census over time across Australia

	CALD n (%)	Non-CALD n (%)	Total n (%)
2009	45,120 (17.3)	216,027 (82.7)	261,147 (100.0)
2012	52,923 (18.3)	237,050 (81.7)	289,973 (100.0)
2015	62,206 (20.6)	239,797 (79.4)	302,003 (100.0)
2018	74,990 (24.3)	233,963 (75.7)	308,953 (100.0)

Table 2:
Most prevalent languages among CALD children across Australia in 2018

	n (%)
Mandarin	8,903 (11.9)
Arabic	7,979 (10.6)
Vietnamese	4,524 (6.0)
Hindi	4,189 (5.6)
Punjabi	3,345 (4.5)
Cantonese	2,600 (3.5)
Urdu	1,927 (2.6)
Korean	1,813 (2.4)
Spanish	1,711 (2.3)
Tagalog	1,552 (2.1)

We compared developmental outcomes, as measured by the AEDC, for children from CALD backgrounds and other children across Australia. Table 3 presents the number and percentage of children who were developmentally vulnerable according to the two AEDC summary indicators (i.e. developmentally vulnerable on one or more domains, and developmentally vulnerable on two or more domains) separately for children from CALD and non-CALD backgrounds across 2009, 2012, 2015 and 2018 cohorts. There were clear disparities in the prevalence of developmental vulnerability among children from CALD and non-CALD backgrounds. Specifically, the percentage of children who were developmentally vulnerable at school entry was higher among children from CALD backgrounds, relative to other children (e.g. 23.3% versus 19.7% developmentally vulnerable on one or more domain in the 2018 cohort). However, as demonstrated in Figure 2, although the percentage of developmentally vulnerable children has decreased over time across both groups, this decrease has been larger among children from CALD backgrounds.

Table 3.
Developmental vulnerability among CALD and non-CALD children over time across Australia

	CALD n (%)	Non-CALD n (%)
One or more domains		
2009	13,086 (29.0)	44,950 (20.8)
2012	14,010 (26.5)	45,923 (19.4)
2015	15,717 (25.3)	47,243 (19.7)
2018	17,446 (23.3)	46,002 (19.7)
Two or more domains		
2009	6,600 (14.6)	22,627 (10.5)
2012	6,729 (12.7)	22,814 (9.6)
2015	7,768 (12.5)	23,986 (10.0)
2018	8,576 (11.4)	23,858 (10.2)

Encouragingly, this highlights that the gap in developmental outcomes between children from CALD and non-CALD backgrounds has been closing over time. Specifically, the proportion of children who were developmentally vulnerable on one or more domains was 8.2 per cent higher among children from a CALD background in 2009, while this difference was only 3.6 per cent in 2018. Similarly, in 2009 the proportion of children who were developmentally vulnerable on two or more domains was 4.1 per cent higher among children from CALD backgrounds, while this difference decreased to 1.2 per cent in 2018. However, it is important to consider these results together with the increasing number and percentage of children from CALD backgrounds as described earlier. Despite a decrease in the percentage of developmentally vulnerable children from CALD backgrounds, the absolute number of developmentally vulnerable children has increased over time, from 13,086 children vulnerable on one or more domains in 2009, to 17,446 children in the 2018 AEDC cohort. This has important implications for service provision across Australia, with increasing numbers of families from CALD backgrounds requiring additional support in the early years.

Figure 2:
Developmental vulnerability among CALD and non-CALD children over time across Australia

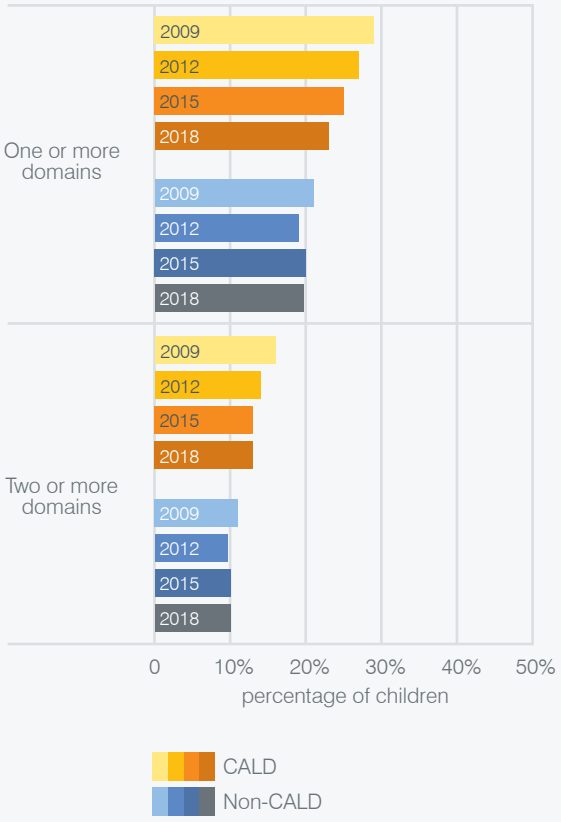
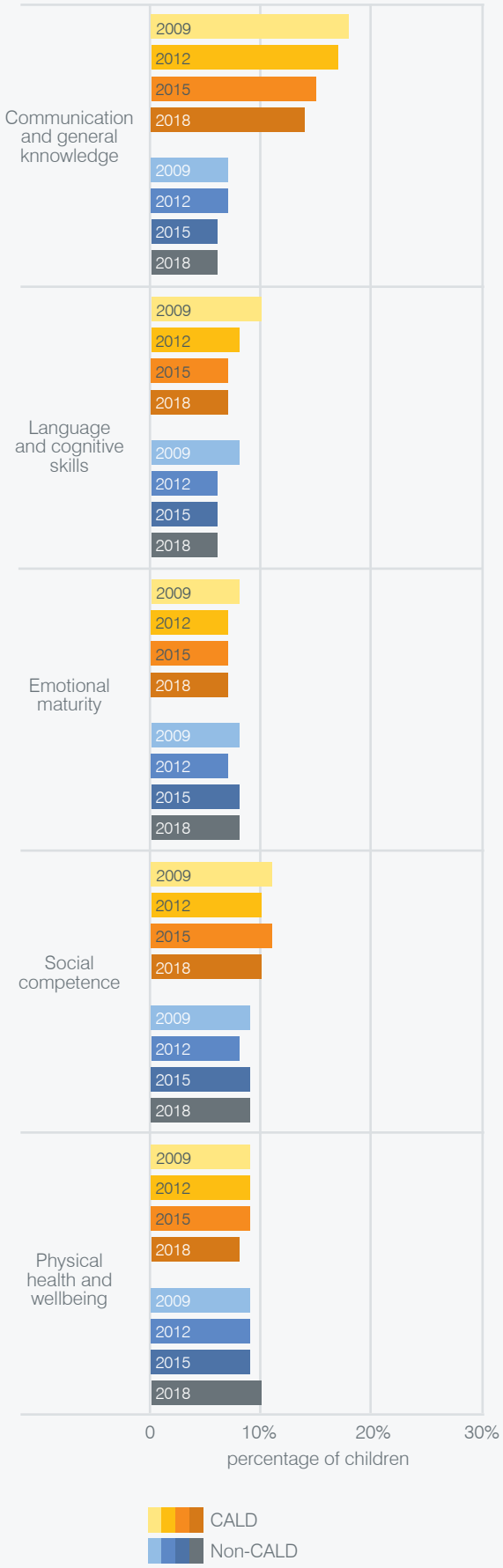


Table 4 explores children's developmental outcomes on each of the five AEDC domains, separately for children from CALD and non-CALD backgrounds across the four AEDC cohorts. Similar to results regarding AEDC summary indicators, the percentage of children from a CALD background classified to be developmentally vulnerable has decreased over time across all domains. This is not the case for children from non-CALD backgrounds however, with developmental vulnerability increasing on both Physical Health and Wellbeing and Social Competence domains over time. Among children from CALD backgrounds, the largest decrease in developmental vulnerability was observed on the Communication Skills and General Knowledge domain (18.3% in 2009 to 13.5% in 2018), followed by the Language and Cognitive Skills domain (10.4% in 2009 to 6.8% in 2018). Again, despite decreases in the percentage of developmentally vulnerable children, the number of developmentally vulnerable children across all domains has increased over time (e.g. 8,259 developmentally vulnerable children on the Communication Skills and General Knowledge domain in 2009, compared to 10,094 in 2018) as a result of an increasing number and percentage of children from CALD backgrounds across Australia.

Table 4:
Developmental vulnerability on each AEDC domain among CALD and non-CALD children over time across Australia

	CALD n (%)	Non-CALD n (%)
Physical Health and Wellbeing		
2009	4,051 (9.0)	18,993 (8.8)
2012	4,544 (8.6)	2,0935 (8.8)
2015	5,341 (8.6)	22,370 (9.3)
2018	6,134 (8.2)	22,113 (9.5)
Social Competence		
2009	4,734 (10.5)	18,691 (8.7)
2012	5,349 (10.1)	20,018 (8.4)
2015	6,535 (10.5)	21,816 (9.1)
2018	7,256 (9.7)	21,417 (9.2)
Emotional Maturity		
2009	3,729 (8.3)	18,098 (8.4)
2012	3,616 (6.8)	17,229 (7.3)
2015	4,612 (7.4)	19,254 (8.0)
2018	5,062 (6.8)	19,615 (8.4)
Language and Cognitive Skills		
2009	4,698 (10.4)	17,235 (8.0)
2012	4,124 (7.8)	14,440 (6.1)
2015	4,510 (7.3)	14,023 (5.8)
2018	5,115 (6.8)	14,302 (6.1)
Communication and General Knowledge		
2009	8,259 (18.3)	14,442 (6.7)
2012	8,863 (16.7)	15,657 (6.6)
2015	9,290 (14.9)	15,185 (6.3)
2018	10,094 (13.5)	14,138 (6.0)

Figure 3.
Developmental vulnerability on each AEDC domain for CALD and non-CALD children over time across Australia



As depicted in Figure 3, the largest developmental differences between children from CALD and non-CALD backgrounds were observed on the Communication Skills and General Knowledge domain. The percentage of children from CALD backgrounds who were developmentally vulnerable on this domain was more than double that of children from non-CALD backgrounds (e.g. 13.5% vs 6.0% in 2018), and this difference has been stable over time across each cohort of children. To interpret this finding, it is important to consider the skills and abilities this domain captures (as described in the methods section of this report). For instance, it is possible that inclusion of items focused on a child's ability to listen and use language effectively in English is contributing to disparities in results between children from CALD backgrounds and other children. In contrast, among the 2018 cohort the percentage of developmentally vulnerable children on the Physical Health and Wellbeing and Emotional Maturity domains was higher among children from non-CALD backgrounds. Across both domains, this was a result of decreasing vulnerability among children from CALD backgrounds, coupled with increasing vulnerability among children from non-CALD backgrounds. Together, these findings help to highlight areas of strength among children from CALD backgrounds, as well as areas of development where additional supports are required to ensure children are able to reach their developmental potential.

Trends in ECEC attendance among children from CALD backgrounds across Australia

Key points

- While there has been an increase in children from CALD backgrounds attending ECEC over time, children from CALD backgrounds are still less likely to participate in ECEC than their non-CALD peers.
  - The percentage of children from CALD backgrounds attending ECEC has increased from 2009 (77%) to 2018 (82.2%).
  - However, this remains lower than their non-CALD peers (2009: 82.2%; 2018: 90.8%).
- Preschool was the most common form of ECEC attended by all children. However, while attendance at preschool among children from CALD backgrounds has increased, there remains a significant gap in preschool attendance between children from CALD and non-CALD backgrounds.
- For example, in 2018, 10.1 per cent of CALD children did not attend preschool compared to 6 per cent of non-CALD children.
- Early intervention includes professional support such as speech and language support, occupational therapy and behavioural support. The AEDC analysis highlights that CALD children who are likely to benefit from early intervention support may not be receiving it.

We explored ECEC attendance as reported by teachers[2], separately for children from CALD and non-CALD backgrounds across each of the four AEDC cycles. Tables 5-9 present the number and percentage of children who attended and did not attend preschool, day-care, playgroup, an early intervention program and other non-parental care[3], as well as the children for whom their teachers responded "don't know" to these questions. In some instances, the proportion of children for whom their teachers did not know about their ECEC attendance before school is large and so it is critical to present these responses when exploring trends in attendance.

As Figure 4 highlights, preschool was the most commonly attended form of ECEC among children irrespective of their cultural background. In 2018, 77.9 per cent of children from a CALD background attended preschool in the year before school, while 10.1 per cent were reported not to have attended. As described in the review of the literature presented earlier, preschool enables children to develop skills that are essential for a successful transition into the school environment, which has lasting effects throughout childhood and adolescence.

While the proportion of children from a CALD background who did not attend preschool has decreased over time, results show that in 2018, 1 in 10 children from CALD backgrounds (or 10.1%) did not attend preschool, compared to about 1 in 20 children from non-CALD backgrounds (or 6%). Working to better understand and then address the barriers associated with preschool attendance among CALD families will play an important role in reducing developmental disparities between children from CALD backgrounds and other children in Australia.

2 Across Australia, ECEC attendance information was missing for 1,473 (0.7%) non-CALD and 576 (1.3%) CALD children in 2009; 1,046 (0.4%) non-CALD and 340 (0.6%) CALD children in 2012; 740 (0.3%) non-CALD and 271 (0.4%) CALD children in 2015; and 695 (0.3%) non-CALD and 312 (0.4%) CALD children in 2018.

3 See the methods section of this report for a description of each of these forms of ECEC.

Table 5:
Preschool attendance among CALD and non-CALD children over time across Australia

	CALD n (%)	Non-CALD n (%)
2009		
Attended	28,915 (64.9)	164,076 (76.5)
Did not attend	7,412 (16.6)	22,516 (10.5)
Don't know	8,217 (18.4)	27,962 (13.0)
2012		
Attended	33,820 (64.3)	178,866 (75.8)
Did not attend	5,695 (10.8)	16,531 (7.0)
Don't know	13,068 (24.9)	40,607 (17.2)
2015		
Attended	45,581 (73.6)	201,517 (84.3)
Did not attend	7,705 (12.4)	17,971 (7.5)
Don't know	8,649 (14.0)	19,569 (8.2)
2018		
Attended	58,207 (77.9)	203,648 (87.3)
Did not attend	7,561 (10.1)	14,001 (6.0)
Don't know	8,910 (11.9)	15,619 (6.7)

Table 6.
Day-care attendance among CALD and non-CALD children over time across Australia

	CALD n (%)	Non-CALD n (%)
2009		
Attended	13,668 (30.7)	69,661 (32.5)
Did not attend	26,531 (59.6)	130,077 (60.6)
Don't know	4,345 (9.8)	14,816 (6.9)
2012		
Attended	14,004 (26.6)	70,808 (30.0)
Did not attend	21,171 (40.3)	93,362 (39.6)
Don't know	17,408 (33.1)	71,834 (30.4)
2015		
Attended	14,226 (23.0)	63,147 (26.4)
Did not attend	21,045 (34.0)	86,130 (36.0)
Don't know	26,664 (43.1)	89,780 (37.6)
2018		
Attended	21,819 (29.2)	75,866 (32.5)
Did not attend	21,005 (28.1)	69,930 (30.0)
Don't know	31,854 (42.7)	87,472 (37.5)

Day-care attendance among all children decreased between 2009 and 2015 cohorts, and then increased in 2018 (see Table 6). These trends in attendance are likely, in part, a reflection of shifts in early childhood service provision and policy over time. Differences in the percentage of children attending day-care before school did not differ greatly between children from a CALD background and other children. In 2018, 29.2 per cent of children from a CALD background were reported to have attended day-care before school, relative to 32.5 per cent of children from non-CALD backgrounds.

Table 7.
Playgroup attendance[4] among CALD and non-CALD children over time across Australia

	CALD n (%)	Non-CALD n (%)
2012		
Attended	4,343 (8.3)	38,609 (16.4)
Did not attend	16,463 (31.3)	59,830 (25.4)
Don't know	31,777 (60.4)	137,565 (58.3)
2015		
Attended	5,086 (8.2)	35,657 (14.9)
Did not attend	17,528 (28.3)	56,471 (23.6)
Don't know	39,321 (63.5)	146,929 (61.5)
2018		
Attended	6,724 (9.0)	34,586 (14.8)
Did not attend	18,693 (25.0)	53,440 (22.9)
Don't know	49,261 (66.0)	145,242 (62.3)

Playgroup attendance was particularly low among children from a CALD background. However, in the case of both children from CALD and non-CALD backgrounds, the majority of children's teachers reported that they did not know whether children attended playgroup before school (Table 7). Between 2012 (when playgroup attendance information was first collected via the AEDC) and 2018, the percentage of children from a CALD background who had attended playgroup increased slightly (8.3% to 9.0%), while the percentage of children from non-CALD backgrounds who attended decreased (16.4% to 14.8%). As a result, the gap in playgroup attendance between children from CALD backgrounds and other children has reduced over time.

4 Information regarding playgroup attendance was not collected in the 2009 AEDC cycle.

Table 8.
Early intervention program attendance among CALD and non-CALD children over time across Australia

	CALD n (%)	Non-CALD n (%)
2009		
Attended	2,048 (4.6)	16,054 (7.5)
Did not attend	37,789 (84.8)	182,438 (85.0)
Don't know	4,707 (10.6)	16,062 (7.5)
2012		
Attended	2,049 (3.9)	18,059 (7.7)
Did not attend	41,284 (78.5)	188,490 (79.9)
Don't know	9,250 (17.6)	29,455 (12.5)
2015		
Attended	2,923 (4.7)	21,114 (8.8)
Did not attend	48,989 (79.1)	194,140 (81.2)
Don't know	10,023 (16.2)	23,803 (10.0)
2018		
Attended	3,834 (5.1)	23,827 (10.2)
Did not attend	54,278 (72.7)	175,615 (75.3)
Don't know	16,566 (22.2)	33,826 (14.5)

We also explored children's participation in an early intervention program before school, such as speech and language support, occupational therapy, behavioural support including a psychologist or counsellor, or a disability support service. Results in Table 8 indicate that a smaller percentage of children from CALD backgrounds received such early intervention support, relative to children from non-CALD backgrounds. Among the 2018 cohort, 5.1 per cent of children from a CALD background were reported to have attended an early intervention program, half that of children from non-CALD backgrounds (10.2%). These results suggest a number of children from a CALD background who might benefit from the specialised support of an early intervention program prior to enrolling in school are not receiving it.

Table 9 presents the number and percentage of children who attended other non-parental care before school, including with a child's grandparent, other relative, nanny, friend or neighbour. A large percentage of children's teachers reported they did not know about children's experiences of this form of ECEC before school. Among all children, other forms of non-parental care more or less doubled between 2009 and 2018. In this time, the gap in the percentage of children from CALD backgrounds who attended other forms of non-parental care grew larger, from 5.6 per cent versus 6.6 per cent in 2009, to 10.5 per cent versus 14.0 per cent in 2018.

Table 9.
Other non-parental care among CALD and non-CALD children over time across Australia

	CALD n (%)	Non-CALD n (%)
2009		
Attended	2,527 (5.6)	14,195 (6.6)
Did not attend	40,284 (89.3)	190,568 (88.2)
Don't know	2,309 (5.1)	11,264 (5.2)
2012		
Attended	5,866 (11.1)	31,011 (13.1)
Did not attend	25,695 (48.6)	120,928 (51.0)
Don't know	21,362 (40.4)	85,111 (35.9)
2015		
Attended	7,435 (12.0)	33,553 (14.0)
Did not attend	28,170 (45.3)	115,004 (48.0)
Don't know	26,601 (42.8)	91,240 (38.0)
2018		
Attended	7,901 (10.5)	32,704 (14.0)
Did not attend	31,457 (41.9)	102,830 (44.0)
Don't know	35,632 (47.5)	98,429 (42.1)

Overall, ECEC attendance results highlight that children from CALD backgrounds are less likely to participate in ECEC relative to their peers from non-CALD backgrounds. These findings are aligned with the existing evidence from the scientific literature. The findings presented here add to current understanding by exploring participation in different forms of ECEC and how attendance has changed over time. Further, results indicating a greater proportion of "don't know" responses from teachers of the participation of children from a CALD background, relative to that of non-CALD children, might reflect barriers in school transition processes that should be explored further.

All ECEC variables were combined into a summary variable indicating any form of ECEC attendance (i.e. whether a child attended either preschool, day-care, playgroup, an early intervention program or other non-parental care) before commencing school. Encouragingly, among the 2018 AEDC cohort, results highlight that the majority of all children attended some form of ECEC before school. Specifically, 82.2 per cent of children from CALD backgrounds and 90.8 per cent of children from non-CALD backgrounds were reported to have participated in ECEC. Further, Figure 5 highlights that the percentage of children attending ECEC across both CALD and non-CALD categories has increased over time. Despite these encouraging results, among the 2018 AEDC cohort, the percentage of children from a CALD background who did not attend any form of ECEC before school was almost double that of other children from non-CALD backgrounds; 12.8 per cent compared to 6.8 per cent. Nationally, this equates to almost 10,000 children from a CALD background who are not receiving the associated benefits of ECEC environments for their cognitive, language, as well as social and emotional development. We explore this relationship further in the next section of the report, which is focused on differences in developmental vulnerabilities between children who did and did not attend ECEC before starting school.

Figure 4:
ECEC attendance among CALD and non-CALD children over time across Australia

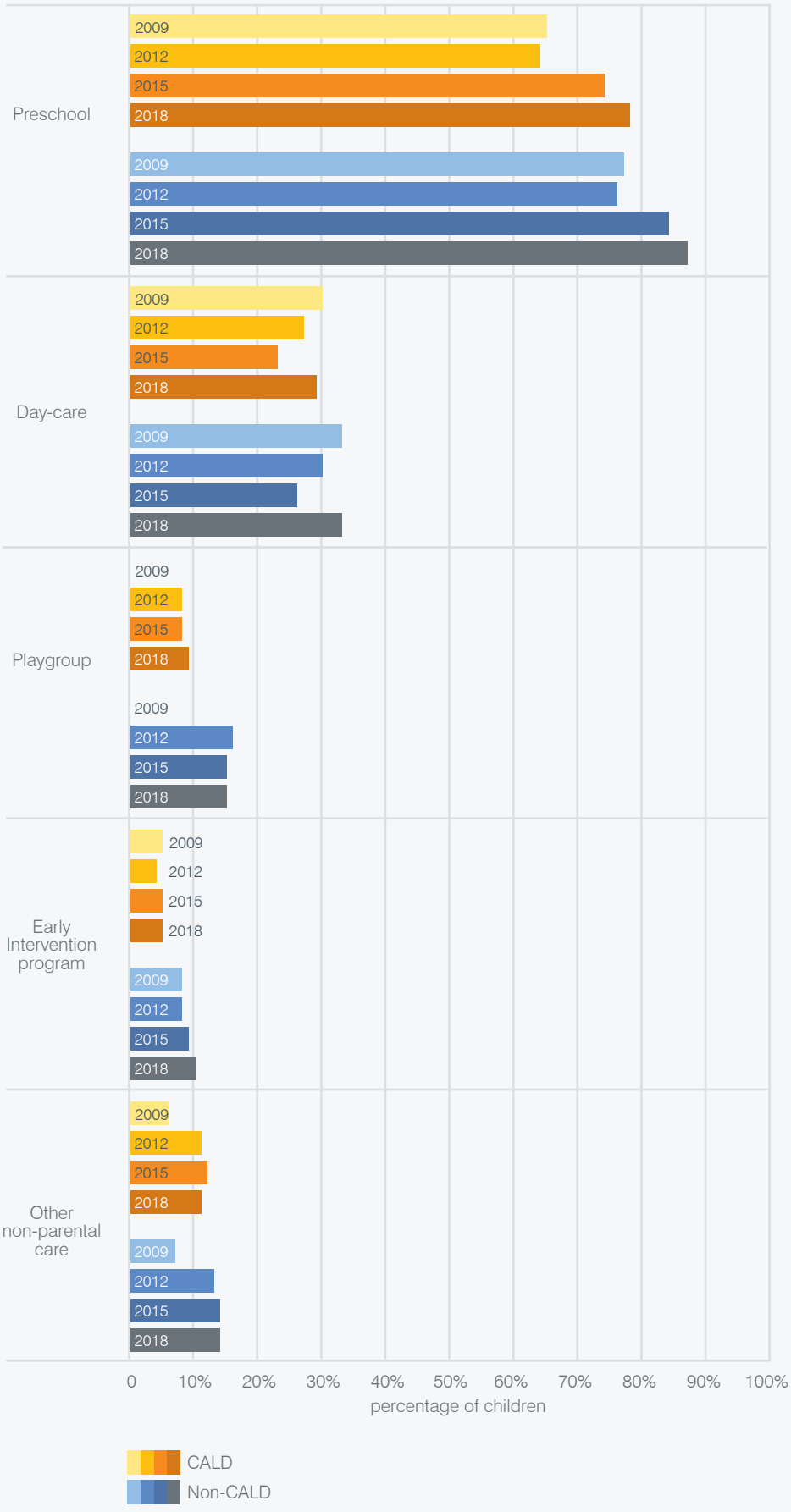
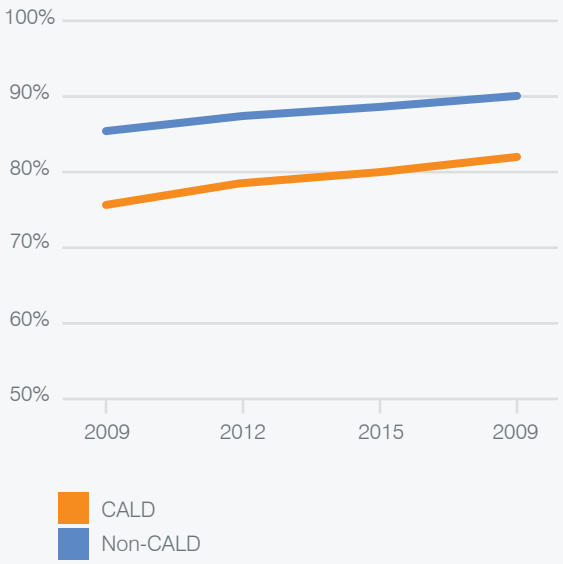


Table 10:
Any ECEC attendance among CALD and non-CALD children over time across Australia

	CALD n (%)	Non-CALD n (%)
2009		
Attended	34,739 (77.0)	184,878 (85.6)
Did not attend	10,381 (23.0)	31,149 (14.4)
Don't know	0 (0.0)	0 (0.0)
2012		
Attended	41,955 (79.3)	208,375 (87.9)
Did not attend	8,263 (15.6)	21,779 (9.2)
Don't know	2,705 (5.1)	6,896 (2.9)
2015		
Attended	49,623 (79.8)	213,942 (89.2)
Did not attend	9,614 (15.5)	20,044 (8.4)
Don't know	2,969 (4.8)	5,811 (2.4)
2018		
Attended	61,658 (82.2)	21,2423 (90.8)
Did not attend	9,630 (12.8)	16,013 (6.8)
Don't know	3,702 (4.9)	5,527 (2.4)

Figure 5:
Any ECEC attendance among CALD and non-CALD children over time across Australia



The relationship between ECEC attendance and early development outcomes among children from CALD backgrounds across Australia

Key points

- There was a greater prevalence of developmental vulnerability among children who did not attend any ECEC when compared to those who did.
- For children from CALD backgrounds, gaps in developmental vulnerability between those who did and did not attend ECEC were largest on Language and Cognitive Skills and Communication Skills and General Knowledge domains.
- Preschool attendance had the strongest positive relationship with development among children from CALD backgrounds. Specifically, CALD children who did not attend preschool had 2.17 times greater odds of being developmentally vulnerable on one or more AEDC domain, compared to children who did attend. Playgroup and day-care attendance had smaller yet positive relationships with development for CALD children.
- Overall, this study found a strong relationship between ECEC attendance and positive developmental outcomes among children from CALD backgrounds.

Throughout this section, we used the most recent data from the 2018 AEDC cohort to demonstrate the relationship between ECEC attendance and child development outcomes. Table 11 presents the number and percentage of developmentally vulnerable children on AEDC summary indicators for those who did and did not attend any ECEC, separately for children from a CALD background and other children. Table 12 presents this information for each of the five AEDC domains. Overall, results show that, across all domains as well as summary indicators, the prevalence of developmental vulnerability was greater among children who did not attend ECEC before school.

Table 11:
Developmental vulnerability by any ECEC attendance among CALD and non-CALD children across Australia 2018

	CALD n (%)	Non-CALD n (%)
One or more domains		
Attended	13,172 (22.3)	39,562 (19.7)
Did not attend	3,110 (34.2)	4,779 (32.1)
Don't know	1,164 (32.6)	1,661 (31.8)
Two or more domains		
Attended	6,372 (10.8)	20,239 (10.0)
Did not attend	1,642 (18.0)	2,681 (18.0)
Don't know	562 (15.7)	938 (17.9)

Table 12.
Developmental vulnerability across each AEDC domain by any ECEC attendance among CALD and non-CALD children across Australia 2018

	CALD n (%)	Non-CALD n (%)
Physical Health and Wellbeing		
Attended	4,716 (8.0)	18,754 (9.3)
Did not attend	1,088 (11.9)	2,570 (17.2)
Don't know	330 (9.2)	789 (15.0)
Social Competence		
Attended	5,536 (9.3)	18,434 (9.1)
Did not attend	1,236 (13.5)	2,124 (14.2)
Don't know	484 (13.4)	859 (16.3)
Emotional Maturity		
Attended	4,055 (6.9)	17,419 (8.7)
Did not attend	737 (8.1)	1,616 (10.9)
Don't know	270 (7.6)	580 (11.1)
Language and Cognitive Skills		
Attended	3,581 (6.0)	11,522 (5.7)
Did not attend	1,161 (12.7)	2,150 (14.4)
Don't know	373 (10.4)	630 (12.0)
Communication and General Knowledge		
Attended	7,309 (12.3)	11,577 (5.7)
Did not attend	2,070 (22.7)	1,945 (13.0)
Don't know	715 (19.8)	616 (11.7)

Figure 6 highlights that the largest differences in developmental vulnerability between children from a CALD background who did and did not attend ECEC were observed on Language and Cognitive Skills and Communication Skills and General Knowledge domains. Specifically, the prevalence of developmental vulnerability on these domains among children from a CALD background who did not attend ECEC was approximately double that of children who did attend (6.0% versus 12.7% and 12.3% versus 22.7%, respectively). Among CALD children, there were smaller differences in developmental vulnerability between children who did and did not attend ECEC on Social Competence and Emotional Maturity domains.

Figure 6.
Developmental vulnerability across each AEDC domain by any ECEC attendance among CALD and non-CALD children across Australia 2018

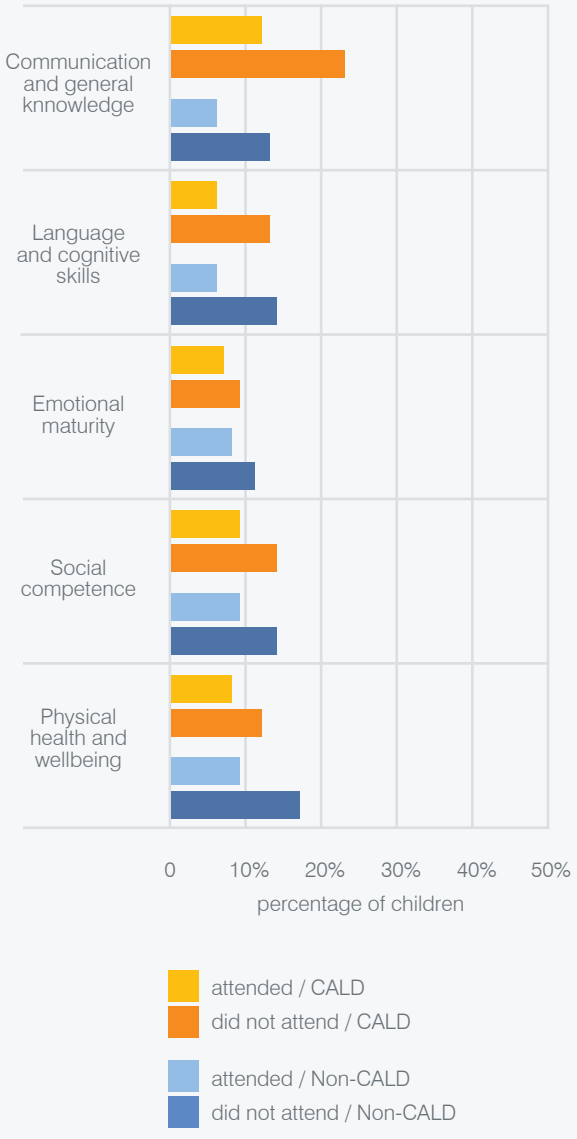


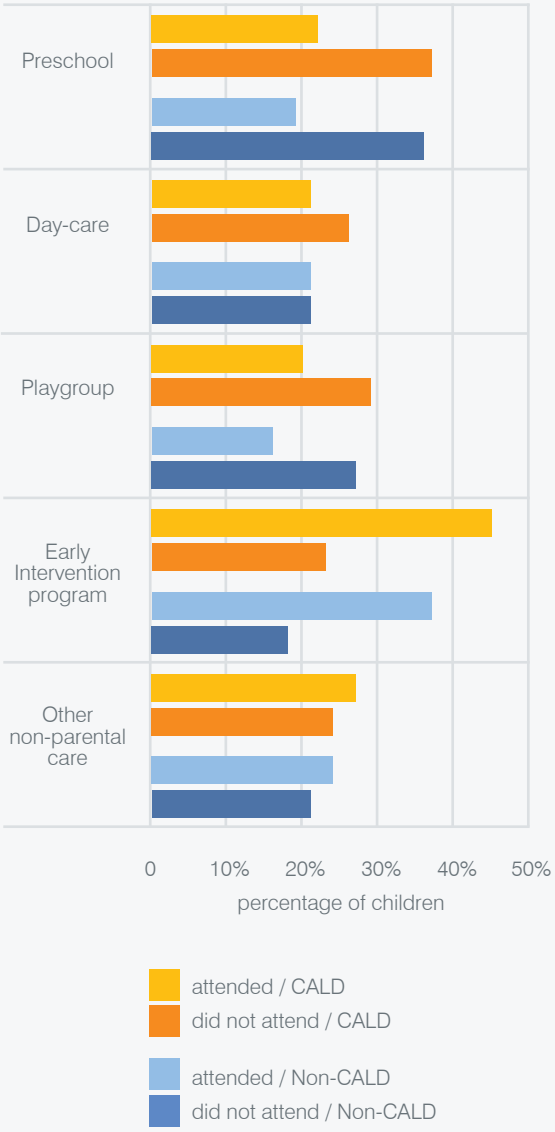
Table 13.
Developmental vulnerability by different types of ECEC attendance among CALD and non-CALD children across Australia 2018

	CALD n (%)	Non-CALD n (%)
Preschool		
One or more domains		
Attended	12,039 (21.5)	36,859 (19.1)
Did not attend	2,720 (37.4)	4,702 (35.5)
Don't know	2,687 (31.2)	4,441 (29.9)
Two or more domains		
Attended	5,736 (10.2)	18,615 (9.6)
Did not attend	1,531 (21.0)	2,811 (21.2)
Don't know	1,309 (15.2)	2,432 (16.3)
Day-care		
One or more domains		
Attended	4,390 (20.9)	14,865 (20.5)
Did not attend	5,325 (26.4)	13,860 (21.0)
Don't know	7,731 (25.3)	17,277 (20.9)
Two or more domains		
Attended	2,082 (9.9)	7,653 (10.6)
Did not attend	2,742 (13.6)	7,343 (11.1)
Don't know	3,752 (12.2)	8,862 (10.7)
Playgroup		
One or more domains		
Attended	1,304 (20.2)	5,320 (16.2)
Did not attend	5,265 (29.3)	13,596 (26.9)
Don't know	10,877 (23.0)	27,086 (19.6)
Two or more domains		
Attended	641 (9.9)	2,550 (7.7)
Did not attend	2,763 (15.4)	7,688 (15.2)
Don't know	5,172 (10.9)	13,620 (9.9)
Early intervention program		
One or more domains		
Attended	1,160 (45.2)	6,358 (37.0)
Did not attend	12,025 (22.5)	31,633 (18.4)
Don't know	4,261 (26.9)	8,011 (25.2)
Two or more domains		
Attended	718 (28.0)	3,702 (21.5)
Did not attend	5,815 (10.9)	15,926 (9.2)
Don't know	2,043 (12.8)	4,230 (13.3)
Other non-parental care		
One or more domains		
Attended	2,047 (27.2)	7,236 (23.6)
Did not attend	7,200 (24.1)	19,842 (20.5)
Don't know	8,199 (23.9)	18,924 (20.2)
Two or more domains		
Attended	1,087 (14.4)	3,951 (12.9)
Did not attend	3,579 (11.9)	10,243 (10.6)
Don't know	3,910 (11.3)	9,664 (10.3)

We explored this in further detail by examining the prevalence of developmental vulnerability on AEDC summary indicators, separately for children who did and did not attend each of the different forms of ECEC (i.e. preschool, day-care, playgroup, an early intervention program or other non-parental care), and separately for children from CALD and non-CALD backgrounds. These results are presented in Table 13 and Figure 7. Among children from a CALD background, the largest difference in developmental vulnerability was observed between children who did and did not attend an early intervention program. We would expect to see higher levels of developmental vulnerability among children who attended an early

intervention program, however, as these are the children who require additional professional supports and would be engaged in targeted programs such as these.

Figure 7.
Developmentally vulnerable on one or more domains by different types of ECEC attendance among CALD and non-CALD children across Australia 2018



Among children from a CALD background, there was also a large difference in developmental vulnerability among children who did and did not attend preschool. Approximately 1 in 5 children who attended preschool were developmentally vulnerable, compared to more than 1 in 3 children who did not attend. Differences in the prevalence of developmental vulnerability were smaller between children from a CALD background who did and did not attend playgroup as well as day-care, with fewer developmentally vulnerable children among those who attended these forms of ECEC. Finally, a larger percentage of children who attended other forms of non-parental care were developmentally vulnerable on one or more AEDC domain, compared to children who did not attend this form of ECEC. The possible reason for this is explained below.

Table 14 presents results from regression analyses exploring the relationship between ECEC attendance and child development outcomes, separately for children from CALD and non-CALD backgrounds[5]. Odds ratios (ORs) represent the odds that children who did not attend ECEC were developmentally vulnerable on one or more domains compared to those who did attend. Results show that, among children from a CALD background, children who did not attend any form of ECEC had 1.81 times greater odds of being developmentally vulnerable on one or more AEDC domain, compared to children who did attend. This relationship was slightly stronger among children from non-CALD backgrounds, with children who did not attend any ECEC having 1.93 times higher odds of being developmentally vulnerable. Of all forms of ECEC, preschool attendance had the strongest relationship with positive child development, and this was consistent for all children irrespective of their cultural background. Among CALD children, playgroup and day-care attendance had smaller, yet positive relationships with child development, indicating lower prevalence of developmental vulnerability among children who attended. Attendance at early intervention programs and non-parental care, on the other hand, had a negative relationship with child development. As

5 For this analysis, we present most recent data from the 2018 AEDC cohort, and although not presented here, results reflect relationships observed in previous AEDC cohorts also.

described earlier, we would expect this relationship considering the targeted nature of early intervention programs for children requiring additional support. The negative relationship between other non-parental care and children's development, consistent across both categories of children in this analysis, may reflect a variety of factors, including socioeconomic status as well as a lack of access to other forms of quality early learning environments.

This highlights some important points to consider when interpreting results. First, results demonstrate an association or relationship between ECEC attendance and positive child development outcomes, but there are a wide range of factors that will have influenced children's developmental outcomes, beyond ECEC attendance. Further, although the AEDC captures whether children did or did not attend different forms of ECEC, information regarding the amount of ECEC children were exposed to, as well as the quality of these different forms of ECEC, is not available. Nonetheless, the positive relationship between ECEC attendance and children's development observed suggests that increased ECEC attendance among children from a CALD background will lead to benefits for children's developmental outcomes and readiness for school.

Among children from a CALD background … approximately 1 in 5 children who attended preschool were developmentally vulnerable, compared to more than 1 in 3 children who did not attend.

Table 14:
Relationship between ECEC attendance and developmental vulnerability across Australia 2018

	CALD OR (95% CI)	Non-CALD OR (95% CI)
Any ECEC		
Attended	ref	ref
Did not attend	1.81 (1.72-1.90)	1.93 (1.86-2.00)
Preschool		
Attended	ref	ref
Did not attend	2.17 (2.06-2.29)	2.33 (2.24-2.42)
Day-care		
Attended	ref	ref
Did not attend	1.36 (1.30-1.43)	1.03 (1.00-1.06)
Playgroup		
Attended	ref	ref
Did not attend	1.64 (1.53-1.76)	1.91 (1.85-1.98)
Early intervention		
Attended	ref	ref
Did not attend	0.35 (0.33-0.38)	0.38 (0.37-0.40)
Other non-parental care		
Attended	ref	ref
Did not attend	0.85 (0.80-0.90)	0.83 (0.81-0.86)

Estimates of young children from CALD backgrounds with developmental vulnerabilities across Australia

Key points

- This study projects that. of the estimated 355,941 children aged 0-4 years from a CALD background in Australia, 82,934 or 23.3 per cent are estimated to be developmentally vulnerable on one or more domains.
- This demonstrates the need for a series of actions and policy responses to increase participation and access to quality ECEC for CALD families in early childhood.

Using ABS census population estimates as well as proportions of CALD children who were developmentally vulnerable as reported by the 2018 AEDC, we estimated the number and percentage of CALD children aged 0-4 years who are likely to have developmental vulnerabilities nationally. Table 15 indicates that, of the estimated 355,941 children aged 0-4 years from a CALD background, 82,934 or 23.3 per cent of these children are estimated to be developmentally vulnerable on one or more domains. Further, 40,577 or 11.4 per cent of these children are estimated to experience vulnerabilities across two or more domains. These figures intend to provide an understanding of the number of children from CALD backgrounds who will, together with their families, require services and supports to help strengthen their learning and development in order to enable a successful transition to school.

Table 15.
Estimate of CALD children with developmental vulnerabilities across Australia

Number of children aged 0-4 years in 2016 ABS Census	1,464,779
Percentage of CALD children in 2018 AEDC	24.3
Estimate of CALD children aged 0-4 years	355,941
Extrapolated developmental vulnerability	**n (%)**
One or more domains	82,934 (23.3)
Two or more domains	40,577 (11.4)
Physical Health and Wellbeing	29,187 (8.2)
Social Competence	34,526 (9.7)
Emotional Maturity	24,203 (6.8)
Language and Cognitive Skills	24,203 (6.8)
Communication and General Knowledge	48,052 (13.5)

Findings at a state level: NSW, QLD and VIC

Trends in the early development of children from CALD backgrounds in NSW, QLD, VIC

As with trends observed across Australia, the number and percentage of children from CALD backgrounds has increased over time in New South Wales (NSW), Queensland (QLD) and Victoria (VIC) (see Table 16). When looking across jurisdictions, in 2018 NSW had the highest proportion of children from CALD backgrounds in their first year of school (31.3%), while QLD has the lowest (14.7%). Table 17 highlights the 10 most frequent languages spoken at home among children from a CALD background in 2018, with Mandarin, Arabic and Vietnamese reported to be among the most common languages in in each jurisdiction.

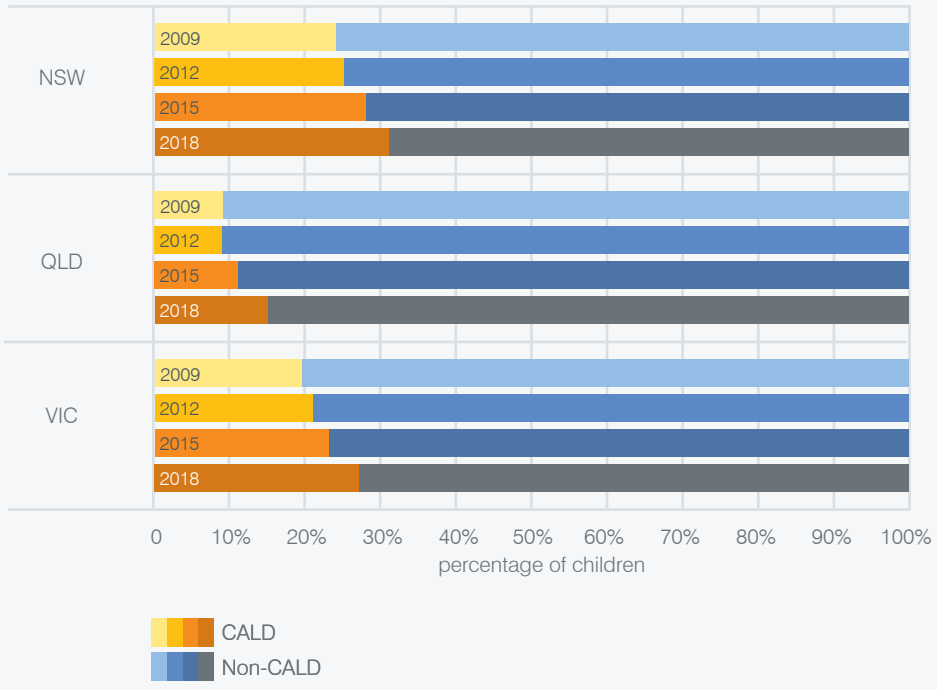
Table 16:
CALD and non-CALD children in the Australian Early Development Census over time in NSW, QLD and VIC

	CALD n (%)	Non-CALD n (%)	Total n (%)
NSW			
2009	20,893 (24.0)	66,277 (76.0)	87,170 (100.0)
2012	23,834 (25.2)	70,738 (74.8)	94,572 (100.0)
2015	26,689 (27.8)	69,467 (72.2)	96,156 (100.0)
2018	30,634 (31.3)	67,386 (68.7)	98,020 (100.0)
QLD			
2009	5,141 (9.3)	50,307 (90.7)	55,448 (100.0)
2012	5,808 (9.4)	55,785 (90.6)	61,593 (100.0)
2015	7,299 (11.2)	57,901 (88.8)	65,200 (100.0)
2018	9,481 (14.7)	55,219 (85.3)	64,700 (100.0)
VIC			
2009	11,979 (19.6)	49,207 (80.4)	61,186 (100.0)
2012	14,281 (21.0)	53,650 (79.0)	67,931 (100.0)
2015	16,736 (23.3)	55,001 (76.7)	71,737 (100.0)
2018	20,653 (27.1)	55,592 (72.9)	76,245 (100.0)

Table 17:
Most prevalent languages among CALD children in NSW, QLD, VIC 2018

NSW n (%)		QLD n (%)		VIC n (%)	
Arabic	4,628 (15.1)	Mandarin	1,081 (11.4)	Mandarin	2,513 (12.2)
Mandarin	3,896 (12.7)	Vietnamese	475 (5.0)	Arabic	1,992 (9.6)
Hindi	1,707 (5.6)	Punjabi	446 (4.7)	Vietnamese	1,624 (7.9)
Vietnamese	1,685 (5.5)	Hindi	441 (4.7)	Punjabi	1,417 (6.9)
Cantonese	1,389 (4.5)	Arabic	436 (4.6)	Hindi	1,356 (6.6)
Korean	921 (3.0)	Korean	405 (4.3)	Cantonese	623 (3.0)
Urdu	831 (2.7)	Japanese	396 (4.2)	Urdu	620 (3.0)
Spanish	827 (2.7)	Samoan	333 (3.5)	Sinhalese	488 (2.4)
Punjabi	777 (2.5)	Spanish	305 (3.2)	Greek	375 (1.8)
Greek	710 (2.3)	Tagalog	246 (2.5)	Dari	361 (1.7)

Figure 8:
CALD and non-CALD children in the Australian Early Development Census over time in NSW, QLD and VIC



Findings at a state level: NSW, QLD and VIC continued

We explored developmental vulnerability according to AEDC summary indicators for children from CALD and non-CALD backgrounds in each jurisdiction over time (Table 18). As with national results, the percentage of developmentally vulnerable children at school entry was higher among children from a CALD background, relative to other children, across NSW, QLD and VIC. These disparities were more pronounced in NSW and VIC, but less so in QLD, despite having a higher prevalence of developmental vulnerability overall. To demonstrate, when looking at 2018 data, the prevalence of developmental vulnerability on one or more domains was 6.6 per cent higher among CALD children relative to non-CALD children in VIC, 5.3 per cent higher in NSW, and 2.6 per cent higher in QLD.

When exploring trends in developmental vulnerability across jurisdictions, there are a number of interesting observations. As with national results, the percentage of developmentally vulnerable children from CALD backgrounds decreased considerably over time across each jurisdiction (Figures 9-11). Reductions in vulnerability among children from a CALD background in QLD were particularly large, from 38.2 per cent of children developmentally vulnerable on one or more domain in 2009 to 26.9 per cent in 2018. This occurred concurrent to marginal decreases in developmental vulnerability among non-CALD children in NSW and QLD, and relatively stable vulnerability among non-CALD children in VIC. Consistent with national results, this demonstrates that the gap in developmental outcomes between children from CALD backgrounds and other children has been narrowing over time. Large reductions in developmental vulnerability in QLD over time, particularly between 2009 and 2012, have been described to reflect state-wide shifts in early childhood policy and service provision (i.e. the introduction of a preparatory year before first grade in 2007, as well as the introduction of universal preschool access in 2009). This underscores the importance of ECEC in promoting children's development and school readiness in the early years, as well as the power of system-wide changes in shifting outcomes at a population level.

It is important to consider these results together with the increasing number and percentage of children from CALD backgrounds. Thus, despite decreasing proportions over time, the number of developmentally vulnerable children from CALD

Table 18.
Developmental vulnerability among CALD and non-CALD children over time in NSW, QLD, VIC

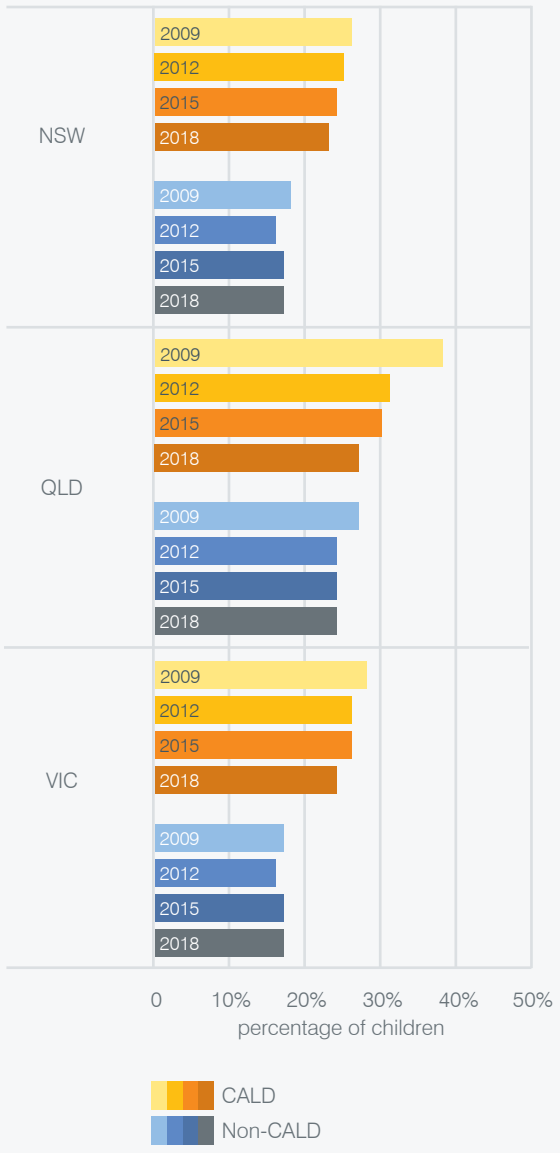
	NSW		QLD		VIC	
	CALD n (%)	Non-CALD n (%)	CALD n (%)	Non-CALD n (%)	CALD n (%)	Non-CALD n (%)
One or more domains						
2009	5,502 (26.3)	12,150 (18.3)	1,965 (38.2)	13,628 (27.1)	3,372 (28.1)	8,269 (16.8)
2012	5,920 (24.8)	11,802 (16.7)	1,817 (31.3)	13,400 (24.0)	3,731 (26.1)	8,676 (16.2)
2015	6,370 (23.9)	12,008 (17.3)	2,167 (29.7)	14,053 (24.3)	4,266 (25.5)	9,199 (16.7)
2018	6,931 (22.6)	11,652 (17.3)	2,553 (26.9)	13,401 (24.3)	4,850 (23.5)	9,382 (16.9)
Two or more domains						
2009	2,561 (12.3)	5,965 (9.0)	1,133 (22.0)	7,174 (14.3)	1,710 (14.3)	4,026 (8.2)
2012	2,667 (11.2)	5,552 (7.8)	943 (16.2)	7,058 (12.7)	1,890 (13.2)	4,163 (7.8)
2015	3,009 (11.3)	5,724 (8.2)	1,123 (15.4)	7,590 (13.1)	2,184 (13.0)	4,523 (8.2)
2018	3,291 (10.7)	5,710 (8.5)	1,248 (13.2)	7,328 (13.3)	2,480 (12.0)	4,751 (8.5)

backgrounds has increased, posing important implications for services providing early childhood support to families from CALD backgrounds.

We explored children's developmental outcomes on each of the five AEDC domains, separately for children from CALD and non-CALD backgrounds across the three jurisdictions over time (Table 19). The percentage of children from a CALD background classified to be developmentally vulnerable decreased over time across all domains in each of NSW, QLD and VIC, with the exception of the Social Competence domain in NSW. Consistent with national results, the largest developmental differences between children from a CALD background and non-CALD children were observed on the Communication Skills and General Knowledge domain, in favour of non-CALD children. Conversely, prevalence of developmental vulnerability was greater among non-CALD children on the Emotional Maturity domain across jurisdictions, Physical Health and Wellbeing in NSW, and Language and Cognitive Skills in QLD, relative to children from a CALD background.

When investigating changes in development over time, results show that the largest decreases in developmental vulnerability among CALD children were typically seen on Communication Skills and General Knowledge and Language and Cognitive Skills domains. This is aligned with results observed for children across Australia. However, trends in development in QLD differ somewhat to that in other jurisdictions. As evident in Table 19, results showed marked decreases in vulnerability on the Language and Cognitive Skills domain in particular. This was true across all children, but most prominent among children from CALD backgrounds. For example, developmental vulnerability on this domain decreased by two thirds, from 21.3 per cent in 2009 to 7.3 per cent in 2018. In this time, there were marked reductions in the percentage of children from CALD backgrounds who were developmentally vulnerable on Social Competence and Emotional Maturity domains, as well as on Communication Skills and General Knowledge. These improvements in the development of cohorts of CALD children in QLD over time are likely attributable to state-wide

Figure 9:
Developmental vulnerability (on one or more domains) among CALD and non-CALD children over time in NSW, QLD, VIC



shifts in early childhood policy and service provision from 2007 onwards. In sections to follow, we further explore the relationship between ECEC and children's development in NSW, QLD and VIC.

Table 19.
Developmental vulnerability on each AEDC domain among CALD and non-CALD children over time in NSW, QLD, VIC

	NSW		QLD		VIC	
	CALD n (%)	Non-CALD n (%)	CALD n (%)	Non-CALD n (%)	CALD n (%)	Non-CALD n (%)
Physical Health and Wellbeing						
2009	1,762 (8.4)	5,414 (8.2)	573 (11.1)	5236 (10.4)	1,024 (8.5)	3,379 (6.9)
2012	1,988 (8.3)	5,405 (7.6)	586 (10.1)	6,173 (11.1)	1,201 (8.4)	3,764 (7.0)
2015	2,226 (8.3)	5,546 (8.0)	765 (10.5)	6,940 (12.0)	1,404 (8.4)	3,931 (7.1)
2018	2,473 (8.1)	5,505 (8.2)	928 (9.8)	6,653 (12.0)	1,663 (8.1)	4,241 (7.6)
Social Competence						
2009	2,033 (9.7)	5,247 (7.9)	692 (13.5)	5,706 (11.3)	1,278 (10.7)	3,547 (7.2)
2012	2,341 (9.8)	5,237 (7.4)	673 (11.6)	6,044 (10.8)	1,435 (10.0)	3,716 (6.9)
2015	2,788 (10.4)	5,571 (8.0)	889 (12.2)	6,830 (11.8)	1,768 (10.6)	4,166 (7.6)
2018	3,043 (9.9)	5,525 (8.2)	990 (10.4)	6,398 (11.6)	1,990 (9.6)	4,341 (7.8)
Emotional Maturity						
2009	1,438 (6.9)	4,706 (7.1)	539 (10.5)	5,263 (10.5)	1,042 (8.7)	3,692 (7.5)
2012	1,338 (5.6)	4,149 (5.9)	485 (8.4)	4,883 (8.8)	1,082 (7.6)	3,484 (6.5)
2015	1,692 (6.3)	4,484 (6.5)	618 (8.5)	5,648 (9.8)	1,361 (8.1)	4,047 (7.4)
2018	1,765 (5.8)	4,541 (6.7)	761 (8.0)	5,687 (10.3)	1,520 (7.4)	4,271 (7.7)
Language and Cognitive Skills						
2009	1,470 (7.0)	3,385 (5.1)	1,096 (21.3)	7,088 (14.1)	1,083 (9.0)	2,429 (4.9)
2012	1,367 (5.7)	2,884 (4.1)	659 (11.3)	4,645 (8.3)	1,223 (8.6)	2,692 (5.0)
2015	1,470 (5.5)	2,890 (4.2)	695 (9.5)	4,305 (7.4)	1,446 (8.6)	2,846 (5.2)
2018	1,784 (5.8)	3,100 (4.6)	688 (7.3)	4,259 (7.7)	1,661 (8.0)	2,947 (5.3)
Communication and General Knowledge						
2009	3,476 (16.6)	4,123 (6.2)	1,204 (23.4)	4,319 (8.6)	2,217 (18.5)	2,556 (5.2)
2012	3,651 (15.3)	3,939 (5.6)	1,217 (21.0)	5,022 (9.0)	2,402 (16.8)	2,708 (5.0)
2015	3,627 (13.6)	3,733 (5.4)	1,385 (19.0)	5,148 (8.9)	2,519 (15.1)	2,612 (4.7)
2018	3,928 (12.8)	3,520 (5.2)	1,572 (16.6)	4,676 (8.5)	2,817 (13.6)	2,495 (4.5)

Trends in ECEC attendance among children from CALD backgrounds in NSW, QLD, VIC

We explored trends in ECEC attendance as reported by teachers, separately for children from CALD and non-CALD backgrounds across jurisdictions. Appendices 1-3 present the percentage of children who attended preschool, day-care, playgroup, an early intervention program and other non-parental care[6] separately for each NSW, QLD and VIC, and results are summarised below.

Consistent with national results, preschool was the most commonly attended form of ECEC among all children. In 2018, preschool attendance among children from a CALD background ranged between 66.8 per cent in QLD, 75.1 per cent in NSW, and 80.7 per cent in VIC. The percentage of CALD children who did not attend preschool in both NSW and QLD was above the national average of 10.1 per cent (14.2% and 16.1%, respectively), while non-attendance was lower in VIC (5.0%). While the proportion of children from a CALD background who did not attend preschool decreased over time in all states, there remained a gap in preschool attendance between children from a CALD background, in favour of non-CALD children. This echoes findings at the national level and highlights the need to address the barriers associated with preschool attendance among CALD families.

Trends in day-care attendance in jurisdictions reflect those at the national level with a decrease among all children between 2009 and 2015 cohorts, followed by an increase in 2018. However, the proportion of children who had attended day-care differed across the jurisdictions. In 2018, 44.6 per cent of children from a CALD background had attended day-care in NSW, 36.7 per cent in QLD, compared to 13.2 per cent in VIC. Although this may be, in part, attributable to the large proportion of children for whom their teachers responded "don't know" to this question in VIC in particular, it is also likely a reflection of differences in early childhood service provision across jurisdictions.

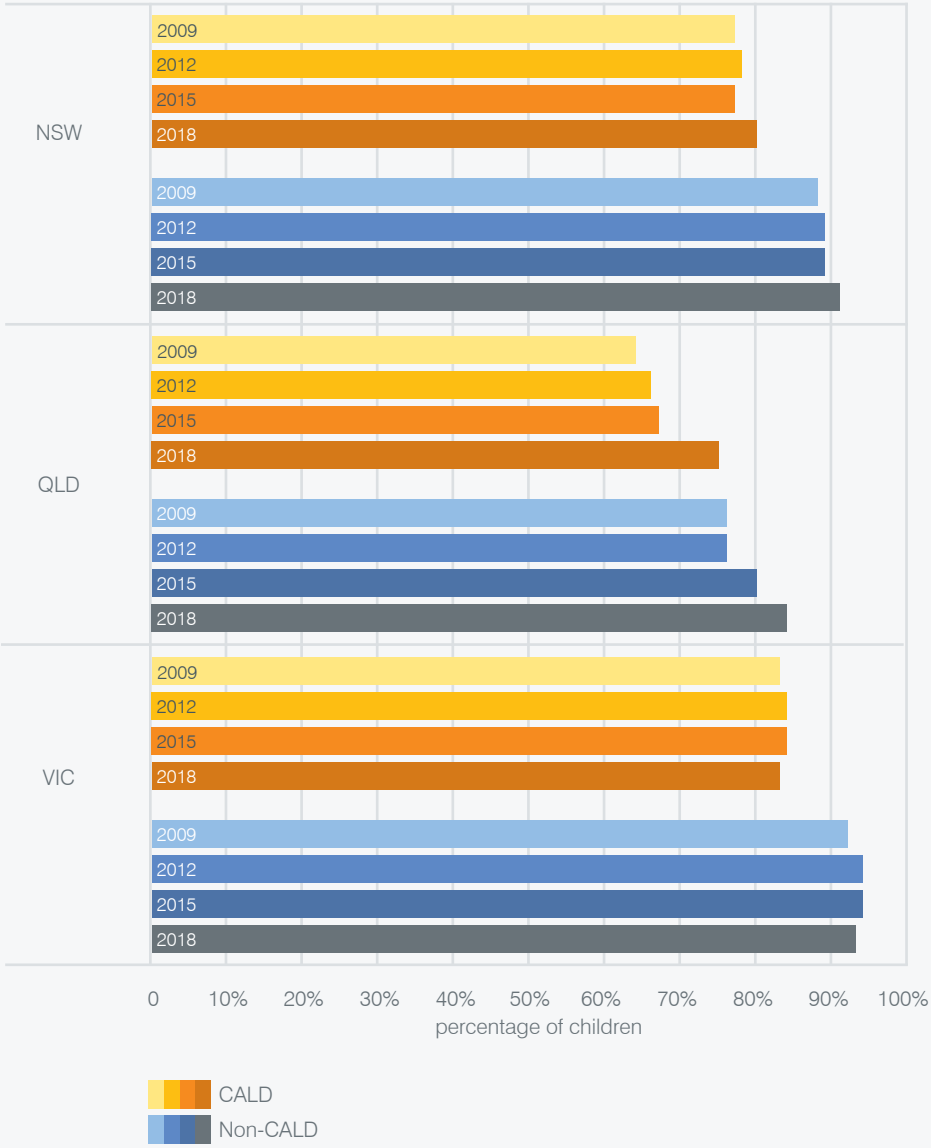
As with national results, playgroup attendance was low among children from a CALD background, ranging from 6.8 per cent in NSW to 15.0 per cent in QLD, though trends in attendance varied across jurisdictions. In NSW, attendance among CALD children remained relatively stable over time, while that of non-CALD children decreased. In VIC, attendance among all children decreased over time. Research on declining playgroup attendance has suggested this may be the result of a variety of factors, including barriers around finding a playgroup that is a good match for families, both in terms of schedules (e.g. finding a session time that works for a two-parent working family) as well as socially (Sincovich, Harman-Smith, & Brinkman, 2014). In contrast, in QLD playgroup attendance among CALD children increased over time, with similar attendance rates among children from CALD and non-CALD backgrounds (in 2018, 15.0% versus 16.7% attendance, respectfully). Learnings from the ways in which provision of and access to playgroups is supported in this context, particularly among CALD families, may be valuable for consideration by other jurisdictions.

Jurisdiction-specific results regarding children's participation in an early intervention program before school reflected the national results, with a smaller percentage of children from CALD backgrounds having received early intervention support, relative to children from non-CALD backgrounds. Trends in participation in other forms of non-parental care did not vary greatly across states. In 2018, attendance among children from a CALD background ranged between 9.1 per cent in NSW, 10.3 per cent in VIC, and 11.3 per cent in QLD. Increased gaps in attendance between CALD and non-CALD children observed at the national level, was not evident in state-level results.

ECEC variables were combined into a summary variable indicating any form of ECEC attendance before school. Results reflect those of the national analysis, with the majority of all children in the 2018 AEDC cohort having attended some form of ECEC before starting school (see Table 20). In this cohort, ECEC attendance among children from a CALD background ranged between 74.9 per cent in QLD, 80.4 per cent in NSW, and 83.1 per cent in

6 See the methods section of this report for a description of each of these forms of ECEC.

Figure 10:
Any ECEC attendance among CALD and non-CALD children over time in NSW, QLD, VIC



VIC. As Figure 12 highlights, in NSW and QLD, the percentage of children attending ECEC from both CALD and non-CALD backgrounds increased over time. While ECEC attendance was highest among children in VIC, it has remained relatively stable over time and decreased marginally among the most recent cohort of children.

Importantly, there remain a considerable number and proportion of children from CALD backgrounds who were not exposed to any form of ECEC before starting school in 2018. This ranged between 10.9 per cent in VIC, 14.7 per cent in NSW, and 18.9 per cent in QLD. These figures are all higher relative to that of non-CALD children; indeed they are more than double in both NSW and VIC. As with national results, this indicates many children from CALD backgrounds are not exposed to the benefits of ECEC and therefore are more likely to face difficulties in the transition to the school environment. The next section of the report explores this relationship in further detail.

Table 20:
Any ECEC attendance among CALD and non-CALD children over time in NSW, QLD, VIC

	NSW		QLD		VIC	
	CALD n (%)	Non-CALD n (%)	CALD n (%)	Non-CALD n (%)	CALD n (%)	Non-CALD n (%)
2009						
Attended	16,008 (76.6)	58,055 (87.6)	3,307 (64.3)	37,923 (75.4)	9,884 (82.5)	45,415 (92.3)
Did not attend	4,885 (23.4)	8,222 (12.4)	1,834 (35.7)	12,384 (24.6)	2,095 (17.5)	3,792 (7.7)
Don't know	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
2012						
Attended	18,599 (78.0)	62,569 (88.5)	3,787 (65.2)	42,620 (76.4)	11,938 (83.6)	50,489 (94.1)
Did not attend	4,037 (16.9)	6,384 (9.0)	1,589 (27.4)	10,184 (18.3)	1,668 (11.7)	2,299 (4.3)
Don't know	1,198 (5.0)	1,785 (2.5)	432 (7.4)	2,981 (5.3)	675 (4.7)	862 (1.6)
2015						
Attended	20,467 (76.7)	61,818 (89.0)	4,900 (67.1)	46,383 (80.1)	14,111 (84.3)	51,569 (93.8)
Did not attend	4,833 (18.1)	6,142 (8.8)	1,773 (24.3)	8,758 (15.1)	1,974 (11.8)	2,590 (4.7)
Don't know	1,389 (5.2)	1,507 (2.2)	626 (8.6)	2,760 (4.8)	651 (3.9)	842 (1.5)
2018						
Attended	24,633 (80.4)	61,263 (90.9)	7,103 (74.9)	46,340 (83.9)	17,160 (83.1)	51,940 (93.4)
Did not attend	4,518 (14.7)	4,829 (7.2)	1,778 (18.8)	6,606 (12.0)	2,261 (10.9)	2,374 (4.3)
Don't know	1,483 (4.8)	1,294 (1.9)	600 (6.3)	2,273 (4.1)	1,232 (6.0)	1,278 (2.3)

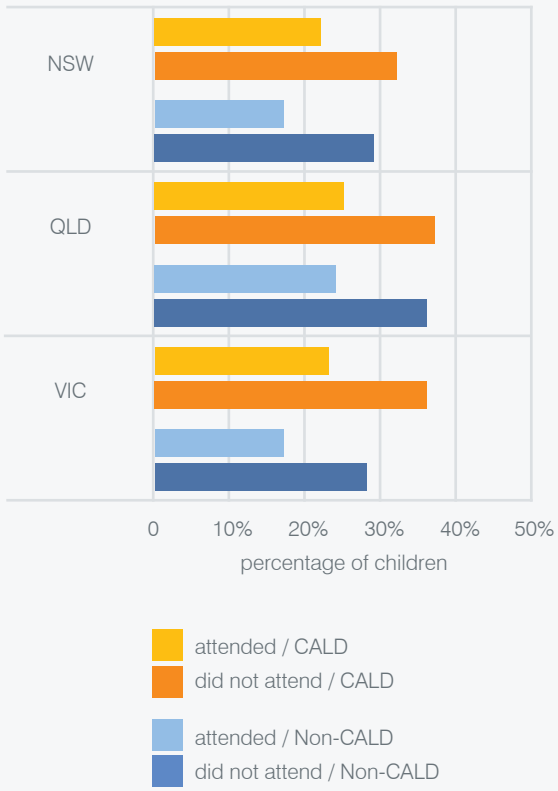
The relationship between ECEC attendance and early development outcomes among children from CALD backgrounds in NSW, QLD, VIC

We used the most recent data from the 2018 AEDC cohort to demonstrate the relationship between ECEC attendance and child development outcomes. Table 21 presents the number and percentage of developmentally vulnerable children on AEDC summary indicators (vulnerable on one or more domains and vulnerable on two or more domains) for those who did and did not attend any form of ECEC, separately for children from CALD and non-CALD backgrounds. Appendices 1-3 present this information in greater detail, including vulnerability on each of the five AEDC domains, as well as developmental vulnerability on AEDC summary indicators for children who did and did not attend each of the different forms of ECEC, separately for each NSW, QLD and VIC. Overall, results reflect that of national analyses. Across all domains as well as summary indicators (e.g. Figure 13), the prevalence of developmental vulnerability was greater among children who did not attend ECEC before school, relative to that among children who attended ECEC in NSW, QLD and VIC. Further, additional information presented in Appendices 1-3 show that the largest differences in developmental vulnerability between CALD children who did and did not attend ECEC were on Language and Cognitive Skills and Communication Skills and General Knowledge domains in all three jurisdictions.

Table 21:
Developmental vulnerability by any ECEC attendance among CALD and non-CALD children in NSW, QLD, VIC 2018

	CALD n (%)	Non-CALD n (%)
NSW		
One or more domains		
Attended	5,108 (21.6)	10,001 (17.2)
Did not attend	1,382 (31.9)	1,329 (29.3)
Don't know	441 (30.6)	322 (26.1)
Two or more domains		
Attended	2,378 (10.0)	167 (8.4)
Did not attend	710 (16.4)	680 (15.0)
Don't know	203 (14.0)	167 (13.5)
QLD		
One or more domains		
Attended	1,715 (25.0)	10,377 (23.6)
Did not attend	634 (36.9)	2,248 (35.7)
Don't know	204 (34.5)	776 (35.8)
Two or more domains		
Attended	823 (12.0)	5,525 (12.5)
Did not attend	327 (19.0)	1,332 (21.1)
Don't know	98 (16.5)	471 (21.7)
VIC		
One or more domains		
Attended	3,701 (22.6)	8,403 (17.3)
Did not attend	756 (36.3)	623 (28.1)
Don't know	393 (33.6)	356 (30.0)
Two or more domains		
Attended	1,867 (11.4)	4,227 (8.7)
Did not attend	424 (20.3)	343 (15.5)
Don't know	189 (16.1)	181 (15.2)

Figure 11:
Developmental vulnerability (one or more domains) by any ECEC attendance among CALD and non-CALD children in NSW, QLD, VIC 2018



Results from regression analyses exploring the relationship between ECEC attendance and child development outcomes, separately for children from CALD and non-CALD backgrounds are presented in Table 22[7]. Odds ratios (ORs) represent the odds that children who did not attend ECEC were developmentally vulnerable on one or more domains compared to those who did attend. Among children from a CALD background, those who did not attend any form of ECEC had higher odds of being developmentally vulnerable on one or more AEDC domain, compared to children who did attend in NSW, QLD and VIC. Specifically, ORs ranged between 1.70 in NSW, 1.75 in QLD, and 1.94 in VIC. Consistent with national results, this relationship was slightly stronger among children from non-CALD backgrounds in NSW (OR 1.70 versus 1.99) and QLD (OR 1.75 versus 1.80). In VIC on the other hand, the relationship between any ECEC attendance and developmental vulnerability was stronger among children from CALD backgrounds.

Of all forms of ECEC, preschool attendance had the strongest relationship with positive development among all children irrespective of cultural background across all jurisdictions. Again, this relationship was found to be strongest among children in VIC, with the odds of developmental vulnerability almost three times as high among children from CALD backgrounds who did not attend preschool before school, relative to those who did attend.

Consistent with national results, playgroup and day-care attendance had smaller, yet positive relationships with child development among children from CALD backgrounds. This indicates lower prevalence of developmental vulnerability among children who attended in all states. The relationship between playgroup attendance and child development in VIC was stronger than that in other jurisdictions and closer in comparison to the relationship between preschool and children's development in this state. Differences in the provision of playgroup, particularly any processes implemented to support the participation of CALD

7 For this analysis, we present most recent data from the 2018 AEDC cohort, and although not presented here, results reflect relationships observed in previous AEDC cohorts also.

Findings at a state level: NSW, QLD and VIC continued

families, might help to highlight drivers of these results. Finally, attendance at early intervention programs and other forms of non-parental care had a negative relationship with child development for children in all jurisdictions, which reflects national results.

These results show an association between ECEC attendance and positive child development outcomes, but there are a wide range of factors that will have influenced children's developmental outcomes beyond ECEC attendance. Nonetheless, results indicate that increased ECEC attendance among children from a CALD background, specifically preschool, playgroup and day-care, are likely to translate to positive outcomes for children's development at school entry.

Table 22:
Relationship between ECEC attendance and developmental vulnerability in NSW, QLD, VIC 2018

	NSW		QLD		VIC	
	CALD OR (95% CI)	Non-CALD OR (95% CI)	CALD OR (95% CI)	Non-CALD OR (95% CI)	CALD OR (95% CI)	Non-CALD OR (95% CI)
Any ECEC						
Attended	ref	ref	ref	ref	ref	ref
Did not attend	1.70 (1.58-1.82)	1.99 (1.86-2.13)	1.75 (1.60-1.96)	1.80 (1.70-1.90)	1.94 (1.76-2.14)	1.87 (1.70-2.06)
Preschool						
Attended	ref	ref	ref	ref	ref	ref
Did not attend	2.04 (1.89-2.19)	2.17 (2.03-2.32)	2.09 (1.85-2.35)	2.24 (2.12-2.38)	2.83 (2.48-3.23)	2.44 (2.18-2.73)
Day-care						
Attended	ref	ref	ref	ref	Ref	ref
Did not attend	1.46 (1.37-1.56)	1.13 (1.08-1.19)	1.36 (1.23-1.54)	0.99 (0.95-1.04)	1.44 (1.29-1.62)	0.85 (0.80-0.91)
Playgroup						
Attended	ref	ref	ref	ref	ref	ref
Did not attend	1.22 (1.09-1.37)	1.61 (1.50-1.74)	1.69 (1.46-1.95)	1.89 (1.78-2.02)	2.42 (2.07-2.82)	2.21 (2.02-2.42)
Early intervention						
Attended	ref	ref	ref	ref	ref	ref
Did not attend	0.35 (0.31-0.40)	0.37 (0.35-0.40)	0.33 (0.26-0.43)	0.41 (0.38-0.44)	0.35 (0.29-0.41)	0.34 (0.32-0.37)
Other non-parental care						
Attended	ref	ref	ref	ref	ref	ref
Did not attend	0.89 (0.81-0.98)	0.91 (0.85-0.97)	0.85 (0.73-0.98)	0.89 (0.84-0.94)	0.82 (0.73-0.92)	0.78 (0.73-0.84)

Estimates of young children from CALD backgrounds with developmental vulnerabilities in NSW, QLD, VIC

Using ABS census population estimates and proportions of CALD children who were developmentally vulnerable as reported by the 2018 AEDC, we estimated the number and percentage of CALD children aged 0-4 years who are likely to have developmental vulnerabilities in each jurisdiction (see Tables 27-29). The number of children from CALD backgrounds aged 0-4 years likely to be developmentally vulnerable on one or more domains ranges from 32,903 in NSW, 23,641 in VIC, and 11,723 in QLD. Again, these estimates provide jurisdictions with an understanding of the number of children from CALD backgrounds requiring additional support for their early learning and development, before they reach school.

The number of children from CALD backgrounds aged 0-4 years likely to be developmentally vulnerable on one or more domains ranges from 32,903 in NSW, 23,641 in VIC, and 11,723 in QLD

Table 23:
Estimate of CALD children with developmental vulnerabilities in NSW, QLD, VIC

	NSW	QLD	VIC
Number of children aged 0-4 years in 2016 ABS Census	465,135	296,466	371,220
Percentage of CALD children in 2018 AEDC	31.3	14.7	27.1
Estimate of CALD children aged 0-4 years	145,587	43,581	100,601
Extrapolated developmental vulnerability	n (%)	n (%)	n (%)
One or more domains	32,903 (22.6)	11,723 (26.9)	23,641 (23.5)
Two or more domains	15,578 (10.7)	5,753 (13.2)	12,072 (12.0)
Physical Health and Wellbeing	11,793 (8.1)	4,271 (9.8)	8,149 (8.1)
Social Competence	14,413 (9.9)	4,532 (10.4)	9,658 (9.6)
Emotional Maturity	84,441 (5.8)	3,487 (8.0)	7,445 (7.4)
Language and Cognitive Skills	84,441 (5.8)	3,181 (7.3)	8,048 (8.0)
Communication and General Knowledge	18,635 (12.8)	7,235 (16.6)	13,682 (13.6)


I
NEW
YORK

Conclusion

A stable environment and nurturing relationships with family, neighbours and communities are critical for optimal childhood development and it is well established that the early years of a child's life can have lasting impacts throughout the life course. There is compelling evidence of the benefits of early childhood education and care (ECEC) (e.g. preschool, day-care and playgroups) to reduce children's developmental vulnerabilities, facilitate successful transition to school and promote positive outcomes throughout the life course. Using data from a national census of children starting full-time school, this research analysed trends in the development of children from CALD and non-CALD backgrounds.

The trends demonstrate that children from CALD backgrounds are more likely to be developmentally vulnerable at school entry than children from non-CALD backgrounds, leading to an increase in the number of children from CALD backgrounds who are developmentally vulnerable over time. The research found clear gaps in ECEC attendance between children from CALD and non-CALD backgrounds. For example, the rate of non-attendance among children from CALD backgrounds was double that of non-CALD backgrounds for some of the most common types of ECEC. The flow-on impact of these differences can be seen in developmental trajectories with children from CALD backgrounds in Australia who did not attend any type of ECEC almost two times more likely to be developmentally vulnerable, compared to those who did attend ECEC. While the analysis of AEDC data showed some variations between the national and state level (New South Wales, Queensland and Victoria), the overall trends remained consistent.

Taken together these findings align with the literature, which highlights the multiple barriers that CALD families face accessing early childhood education and care. Importantly, the findings demonstrate that the lack of access is related to poorer developmental outcomes for the growing number of children from CALD backgrounds at school entry, jeopardising their transition to school and outcomes throughout the life course.

We know that strong early beginnings predict positive long-term trajectories of children. Addressing the policy and service gaps evident in this report will help to reduce developmental disparities observed between children from CALD and non-CALD backgrounds and help to secure Australia's social, cultural and economic future.

Link to Appendices

Appendix 1: Additional tables and figures NSW

Appendix 2: Additional tables and figures QLD

Appendix 3: Additional tables and figures VIC

www.ssi.org.au/images/Stronger_Starts_Brighter_Futures_Appendices.pdf

References

Abdul-Rida, C., & Nauck, B. (2014). Migration and Child Well-Being. In A. Ben-Arieh, F. Casas, I. Frones, & J. E. Korbin, *Handbook of Child Well-Being Theories, Methods and Policies in Global Perspective.* (pp. 3101-3142). Dordrecht: Springer Netherlands.

Boit, R. J., Barnes, A. C., Conlin, D., & Hestenes, L. L. (2020). Voices of Refugee Mothers: Navigating the Complexities of Supporting their Preschool Children's Literacy Development. *Early Childhood Education Journal*.

Brinkman, S. A., Gregory, T. A., Goldfeld, S., Lynch, J. W., & Hardy, M. (2014). Data Resource Profile: The Australian Early Development Index (AEDI). *International Journal of Epidemiology*, 1-8.

Brinkman, S., & Stanley, F. (2014). Public Health Aspects of Child Well-Being. In A. Ben-Arieh, F. Casas, I. Frones, & J. E. Korbin, *Handbook of Child Well-Being: Theories, Methods and Policies in Global Perspective* (pp. 317-350). Dordrecht: Springer Netherlands.

Brinkman, S., Gregory, T., Harris, J., Hart, B., Blackmore, S., & Janus, M. (2013). Associations Between the Early Development Instrument at Age 5, and Reading and Numeracy Skills at Ages 8, 10 and 12: a Prospective Linked Data Study. *Child Indicators Research*, 6(4), 695-708.

Britto, P. R., Lye, S. J., Proulx, K., Yousafzai, A. K., Matthews, S. G., Vaivada, T., … Bhutta, Z. A. (2017). Nurturing care: promoting early childhood development. *Lancet*, 389(10064), 91-102.

Commerford, J., & Robinson, E. (2016). *Supported playgroups for parents and children: the evidence for their benefits*. Melbourne: Australian Institute of Family Studies. Retrieved from https://aifs.gov.au/cfca/publications/supported-playgroups-parents-and-children

Davidson, P., Bradbury, B., Hill, T., & Wong, M. (2020). *Poverty in Australia 2020: Part 2, Who is affected*? ACOSS/UNSW Poverty and Inequality Partnership Report No. 4. Sydney: ACOSS.

De Gioia, K. (2013). Cultural negotiation: Moving beyond a cycle of misunderstanding in early childhood settings. *Journal of Early Childhood Research, 11*(2), 108-122.

Elango, S., Garcia, J. G., Heckman, J. J., & Hojman, A. (2015). *Early childhood education, NBER Working Paper 21766*. Cambridge: National Bureau of Economic Research. Retrieved from https://www.nber.org/papers/w21766

Goldfeld, S., O'Connor, E., O'Connor, M., Sayers, M., Moore, T., Kvalsvig, A., & Brinkman, S. (2016). The role of preschool in promoting children's healthy development: Evidence from an Australian population cohort. *Early Childhood Research Quarterly, 35,* 40-48.

Hernandez, D. J. (2014). Child Well-Being and Ethnic Diversity in Affluent Societies. In A. Ben-Arieh, F. Casas, I. Frones, & J. E. Korbin, *Handbook of Child Well-Being Theories, Methods and Policies in Global Perspective.* (pp. 3159-3192). Dordrecht: Springer Netherlands.

Higgins, D. J. (2015). A public health approach to enhancing safe and supportive family environments for children. *Family Matters, 96*, 39-52. Retrieved from http://www.aifs.gov.au/publications/family-matters/issue-96/public-health-approach-enhancing-safe-and-supportive-family-environments-children.

Janus, M. (2007). The Early Development Instrument, a tool for monitoring children's development and readiness for school. In M. E. Young & L. M. Richardson (Eds.), *Early Child Development – from measurement to action: A priority for growth and equity* (pp. 141-155). Washington DC., USA: World Bank.

Katz, I., & Redmond, G. (2010). Review of the circumstances among children in immigrant families in Australia. *Child Indicators Research, 3,* 439-458.

Marmot, M. (2010). *Fair society, healthy lives: Strategic review of health inequalities in England post-2010.*

Melhuish, E. C. (2003). *A literature review of the impact of early years provision on young children, with emphasis given to children from disadvantaged backgrounds.* London, UK: National Audit Office.

Muir, K., Katz, I., Edwards, B., Gray, M., Wise, S., & Hayes, A. (2010). The national evaluation of the Communities for Children initiative. *Family Matters, 84*, 35-42.

Mustard, J. F. (2007). Experience-based Brain Development: Scientific Underpinnings of the Importance of Early Child Development in a Global World. In M. E. Young & L. M. Richardson (Eds.), *Early Child Development: From Measurement to Action* (pp. 43-84). Washington DC, USA: The World Bank.

National Health and Medical Research Council. (2006). *Cultural competency in health: A guide for policy, partnerships and participation.* Australian Government. Retrieved from https://www.nhmrc.gov.au/about-us/publications/cultural-competency-health

New, R., Guilfoyle, A., & Harman, B. (2015). Children's school readiness: The experiences of African refugee women in a supported playgroup. *Australasian Journal of Early Childhood, 40*(1).

Nores, M., Belfield, C. R., Barnett, W. S., & Schweinhart, L. (2005). Updating the economic impacts of the High/Scope Perry Preschool Program. *Educational Evaluation and Policy Analysis, 27*(3), 245-261.

Patel, S., & Agbenyega, J. (2013). How we view Australian early childhood education practice: Indian migrant parents' perspectives. *Australasian Journal of Early Childhood, 38*(1), 49-54.

Productivity Commission. (2014). *Childcare and Early Childhood Learning: Inquiry Report No 73.* Canberra: Commonwealth of Australia.

Sincovich, A., Gregory, T., Harman-Smith, Y., & Brinkman, S. A. (2020). Exploring Associations Between Playgroup Attendance and Early Childhood Development at School Entry in Australia: A Cross-Sectional Population-Level Study. *American Educational Research Journal, 57*(2), 475-503.

Sincovich, A., Harman-Smith, Y., & Brinkman, S. (2014). A Qualitative Evaluation of the Factors Impacting Participation in a Community Playgroup Program. Telethon Kids Institute, South Australia.

SVA Consulting (2019). The economic case for early intervention in the child protection and out-of-home care system in Victoria. Melbourne, SVA Consulting.

The Front Project and PwC (2019). A Smart Investment for a Smarter Australia: Economic analysis of universal early childhood education in the year before school in Australia, The Front Project.

Targowska, A., Teather, S., & Guilfoyle, A. (2015). Optimising children's readiness to learn through mediating social disadvantage: Exploring models of best practice. *Australasian Journal of Early Childhood, 40*(2), 12-19.

UK Home Office. (2019). *Indicators of Integration Framework*. UK Home Office.

Warr, D., Mann, R., Forbes, D., & Turner, C. (2013). Once you've built some trust: Using playgroups to promote children's health and wellbeing for families from migrant backgrounds. *Australasian Journal of Early Childhood, 38*(1), 41-48.

Williams, K. E., Berthelsen, D., Viviani, M., & Nicholson, J. M. (2018). Facilitated Parent-child Groups as Family Support: A Systematic Literature Review of Supported Playgroup Studies. *Journal of Child and Family Studies, 27*, 2367-2383.

Woolfenden, S., Posada, N., Krchnakova, R., Crawford, J., Gilbert, J., Jursik, B., …Kemp, L. (2015). Equitable access to developmental surveillance and early intervention – understanding the barriers for children from culturally and linguistically diverse (CALD) backgrounds. *Health Expectations, 18*(6), 3286-3301.

Photo by Bailey Torres on Unsplash

www.ssi.org.au