

A photograph of a woman with blonde hair, smiling warmly at a young child. The child is wearing a dark blue long-sleeved shirt with a Spider-Man logo and a dark blue bucket hat. A small, rectangular photograph is pinned to the front of the hat, showing a young girl in a red shirt. The background is slightly blurred, showing what appears to be a classroom or office setting with framed pictures on the wall.

the  
Front  
Project

## **SUPPORTING ALL CHILDREN TO THRIVE**

The importance of equity  
in early childhood education

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The Front Project respectfully acknowledges the Traditional Owners of the land on which we work and learn, and pay respect to First Nations Peoples, and their Elders, past, present, and emerging.

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## Foreword

In 2021, more than 63,000 Australian children were assessed as developmentally vulnerable when they started school, according to the Australian Education Development Census (AEDC).

The Front Project has now analysed this data, revealing for the first time, in detail, the locations and circumstances of these children around the nation.

Our analysis highlights inequality of access to high-quality early education and care services across our country. In Australia, a child's postcode or cultural background should not dictate their level of developmental support, but as this study demonstrates, that is the case.

Between the ages of three and five, children's brains are developing rapidly, unlike any other time in their lives. This is when they are best able to build the foundations for complex problem-solving, creativity, emotional intelligence, flexible thinking, and coordination, among the most essential skills. These are the skills that can change a child's life trajectory, and ensure a high-performing future workforce, securing Australia's competitiveness in a globalised world.

Not acting in the early years to protect and provide good foundations is costly too, leading to greater spending on remedial education, criminal justice and youth offending, and health services, to name a few. And with estimates of the cumulative GDP benefit to 2050 from children receiving a high-quality education and care program ranging from \$2.5 billion to \$10.3 billion, it is clear that reducing developmental vulnerability makes good economic sense.

More than 20 per cent of our nation's four and five year olds are unable to access high-quality early childhood education and care. Not only does this leave children developmentally vulnerable, but it also restricts their parents' ability to return to the workforce. Further, because the problem is often geographically focused, it can affect entire communities.

This analysis puts developmental vulnerability squarely on the policy agenda. We want to work with community and political leaders to solve this serious problem.

I commend this report to all those with an interest in bettering the lives of our most vulnerable children and securing the future of our nation.

A handwritten signature in blue ink, which appears to read 'Jane Hunt'.

**Jane Hunt**  
**CEO, the Front Project**



## Executive Summary

We all want every child to have a healthy and fulfilling life, regardless of their background or where they live. Most of a child's brain development occurs between the ages of one and three years, and research shows that their early experiences set a strong foundation for learning, health and wellbeing throughout their lives. We also know that, to thrive, children need a range of things, including relationships with supportive adults, places to play, clean air, good nutrition, and affordable, high-quality early childhood education and care (ECEC). Children can face a range of risk factors, such as lack of healthy food, family stress and unstable accommodation, but protective factors, such as safe, loving parents and caregivers, and high-quality ECEC, help to protect children and reduce the harm caused by such risks.

Australia has been measuring child development – including developmental vulnerability and the domains that make up child development – for more than a decade, through the Australian Early Development Census (AEDC). The AEDC classifies children as 'on track', 'at risk' or 'vulnerable' depending on how they score in each area of development, known as a domain. Children who are developmentally vulnerable demonstrate a much lower than average ability in at least one AEDC domain. The five domains measured are physical health and wellbeing, social competence, emotional maturity, language and cognitive skills (school-based), and communication skills and general knowledge. These are essential aspects of children's development that have long-term consequences in areas such as adult health, employment, and social outcomes (AEDC 2014).

Each year, more than 60,000 Australian children (22.0 per cent of all children in 2021) are assessed as developmentally vulnerable when they start school. Research shows that around half of these children never catch up. By Grade 3 these children are a year behind their peers on NAPLAN (the national literacy and numeracy assessment that students undertake in Years 3, 5, 7 and 9). By Grade 5 they are on average two years behind their peers on NAPLAN. Evidence shows that, in turn, these students are less likely to finish school, and are more likely to experience unemployment and suffer ill-health throughout their lives.

The gaps and risks are far greater for those children who face more than one risk factor. Growing up in poverty is a strong predictor of a child being developmentally vulnerable by the time they start school. Children in the most disadvantaged socio-economic areas are twice as likely to be developmentally vulnerable (33.2 per cent compared to 14.9 per cent) and three times more likely to be vulnerable in more than one domain (19.1 per cent compared to 6.7 per cent) than children in the most advantaged socio-economic areas.

The further away from the city a child lives, the higher their risk of developmental vulnerability. In very remote areas, nearly one in two children are vulnerable in one domain (46.2 per cent) compared to one in five children (20.8 per cent) in major cities. Aboriginal and Torres Strait Islander children have high levels of vulnerability: 42.3 per cent are vulnerable in one or more domains compared to 20.6 per cent for non-Aboriginal or Torres Strait Islander children. Children from language backgrounds other than English may have difficulties with language, especially if they are not fluent in English at the start of school. More than 90 per cent of children who are not proficient in English are developmentally vulnerable, with 60.5 per cent of these children vulnerable in more than one domain.

Quality ECEC has been shown to reduce vulnerability. Across Australia there are thousands of children whose learning, and life trajectories, have been brought back on track through quality ECEC. Research shows that disadvantaged children stand to benefit the most from ECEC but

also face barriers to access (Melhuish et al. 2015). By supporting all children – particularly those most in need – to attend quality early education, we can give more children the chance to thrive. The risks of not acting are immense, and COVID-19 may increase children’s vulnerability. In 2022 we are seeing the consequences of COVID-19 across the workforce, with staffing shortages due to a combination of the immediate effects of the pandemic and substantially lower levels of skilled immigration. Emerging research is revealing the effects on the development of babies born during the pandemic. There is considerable evidence mounting about disruption to care, harms to family functioning and relationships, and poorer child mental health and wellbeing.

ECEC has a central role to play in Australia’s recovery from the pandemic, not least by helping enable parents to work and supporting the development of all children by minimising the harmful effects of the pandemic on a child’s life.



# 1. Developmental vulnerability: what it means and why it matters

We all want every child to have a healthy and fulfilling life, regardless of their background or where they live. However, not every family or community in Australia has what it needs to thrive. Some children are developmentally vulnerable from an early age, and this puts them at risk of poorer outcomes later in life. Some communities will need additional support to improve children's health and wellbeing and to become vibrant and prosperous. This report takes a closer look at what 'developmental vulnerability' really means; why it matters for our children, society and economy; who is most at risk of developmental vulnerability; and how early childhood education and care (ECEC) can play a role in preventing and mitigating risks.

## Defining and measuring developmental vulnerability

Australia has been measuring child development, including developmental vulnerability and the domains that make up child development, for more than a decade, through the Australian Early Development Census (AEDC). The AEDC provides a national measure of how well children are faring in their first year of school; levels of developmental vulnerability are derived from this dataset. The AEDC was first conducted in 2009 and has since been conducted every three years, with the most recent results from the 2021 census released in April 2022 (AEDC 2022).

Importantly, the AEDC is a census, not a sample survey. The aim is to collect data for the whole population (every child during their first year of school), in order to build a full and detailed picture across Australia. Coverage is around 95 per cent or more of all eligible children in any given census year. The 2021 census included 305,015 children. They were, on average, five years and seven months old. The AEDC dataset contains detailed data for sub-populations such as Aboriginal and Torres Strait Islander children; children born in another country; and children for whom English is not their first language.

The census is conducted in schools. Teachers complete a questionnaire for each student in their class, based on their observations of the child and other data such as ECEC transition reports. This questionnaire covers children's development in five domains known to predict health, education and social outcomes later in life (AEDC 2014). These domains are:

- physical health and wellbeing
- social competence
- emotional maturity
- language and cognitive skills (school-based)
- communication skills and general knowledge.

Figure 1 below provides high-level descriptions of each of the domains, with examples of the types of questions included in the teacher questionnaires. Section 2 of this report explores more detailed examples of what developmental vulnerability might look like, as well as the most significant results and trends in each of these domains from the AEDC data.

<p><b>Physical health and wellbeing:</b> how fit and well our children are</p>	<p>This domain measures how children are physically ready for a day at school, including their physical independence, and gross and fine motor skills. Some of the items extend to a child's environment, such as whether they are tired, hungry or under/overdressed.</p> <p>The types of questions asked include:</p> <ul style="list-style-type: none"> <li>• Since the start of the school year, has the child sometimes (more than once) arrived hungry?</li> <li>• Would you say this child is well coordinated?</li> <li>• How would you rate this child's proficiency at holding a pen, crayon or brush?</li> </ul>
<p><b>Social competence:</b> how our children get along with others</p>	<p>This domain measures children's ability to get along with others, follow routines and exercise self-control.</p> <p>The types of questions asked include:</p> <ul style="list-style-type: none"> <li>• How would you rate this child's ability to get along with peers?</li> <li>• Would you say that this child is able to adjust to changes in routines?</li> <li>• Would you say that this child follows rules and instructions?</li> </ul>
<p><b>Emotional maturity:</b> how our children handle their feelings</p>	<p>This domain measures children's willingness to help others, as well as their ability to control their emotions and behaviours including their anxiety and anger.</p> <p>The types of questions asked include:</p> <ul style="list-style-type: none"> <li>• Would you say this child comforts a child who is crying or upset?</li> <li>• Would you say this child bullies or is mean to others?</li> <li>• Would you say this child is impulsive, and acts without thinking?</li> </ul>
<p><b>Language and cognitive skills:</b> how our children speak, understand and think, based on things they do at school</p>	<p>This domain measures children's literacy, including their interest in books, knowledge of words and sounds, as well as their memory.</p> <p>The types of questions asked include:</p> <ul style="list-style-type: none"> <li>• Would you say this child knows how to handle a book?</li> <li>• Would you say this child is able to identify some letters of the alphabet?</li> <li>• Would you say this child is able to recognise numbers from one to ten?</li> </ul>
<p><b>Communication and general knowledge:</b> what our children know, and all the ways they communicate this</p>	<p>This domain measures children's communication skills and general knowledge.</p> <p>The types of questions asked include:</p> <ul style="list-style-type: none"> <li>• How would you rate this child's ability to understand on first try what is being said to him/her?</li> <li>• How would you rate this child's ability to tell a story?</li> <li>• How would you rate this child's ability to take part in imaginative play?</li> </ul>

**Figure 1: Child development domains measured in the AEDC**

For more detailed information on the census process and questionnaires, see [www.aedc.gov.au](http://www.aedc.gov.au)



For each of the five AEDC domains, each child receives a score between 0 and 10; these scores are used to determine developmental vulnerability. ‘Developmental vulnerability’ is a technical term that is applied to children who score below the domain cut-off baselines in any one of these domains. It means the children are faring less well than their peers in this domain.

Domain cut-offs were set from the 2009 census, with each subsequent census comparing progress against those 2009 scores. Three child development categories are used:

- *Developmentally vulnerable*: In 2009, children who scored below the 10th percentile (in the lowest 10 per cent) of the national population were classified as developmentally vulnerable. For subsequent AEDC surveys, scores below the 2009 cut-off score for the bottom 10 per cent in a domain are classified as developmentally vulnerable.
- *Developmentally at risk*: In 2009, children who scored between the 10th and the 25th percentiles of the national population were classified as developmentally at risk. This means that they are not considered to be vulnerable but may be experiencing risk factors that require additional support. For subsequent AEDC surveys, scores between the 2009 cut-off scores for the 10th and 25th percentiles are classified as developmentally at risk.
- *Developmentally on track*: In 2009, children who scored above the 25th percentile (in the top 75 per cent) of the national population were classified as developmentally on track. For subsequent AEDC census rounds, scores above the 2009 cut-off score for the top 75 per cent are classified as on track.

The cut-off scores stay the same over time and provide a reference point against which later AEDC results can be compared. The national indicator of developmental vulnerability – measured at 22.0 per cent of children starting school in 2021 – refers to the percentage of children who are developmentally vulnerable (that is, below the baseline score) in at least one domain. Australia has made some progress over time at the national level: fewer children were categorised as developmentally vulnerable in the 2021 AEDC than in 2009, with the per cent of children experiencing developmental vulnerability falling from 23.6 per cent to 22.0 per cent.

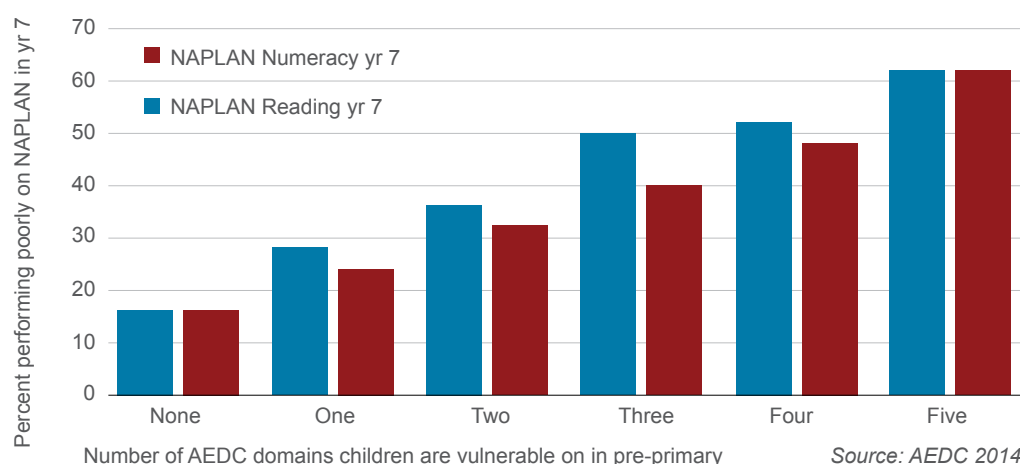
However, children can be developmentally vulnerable in more than one domain. They can also be at risk or not on track in more than one domain. Although the majority (54.8 per cent) of children were on track in all domains, there are locations where higher proportions of children are vulnerable (score below the baseline score), and sub-groups of children who are not on track in several domains. Section 2 of this report discusses which children are most at risk, and in which developmental domains.

## Child developmental vulnerability can have lifelong impact

The first three years of brain development are critical. Risk and protective factors at play during this time will have lifelong consequences (Irwin et al. 2007). Positive stimulation in the early years of zero to five affects subsequent health, wellbeing, coping skills and competence (Wise et al. 2005; Department of Children and Youth Affairs 2013). Children's future achievement is also strongly linked to the skills they develop in the early years (La Paro and Pianta 2000; Lamb et al. 2020). Child health is also a predictor of adult health (Fox et al. 2015). The five developmental domains of the AEDC were chosen because they are good predictors of adult health, education and social outcomes.

Children experiencing developmental vulnerability are more likely to perform poorly at school. The more domains in which a child is developmentally vulnerable, the more likely they will struggle with key areas of learning (Lamb and Huo 2017; Lamb et al. 2020).

Children experiencing developmental vulnerability are on average a year behind their peers by Year 3 of school, and two years behind by Year 5 of school, as assessed on NAPLAN, the national literacy and numeracy assessment that students undertake in Years 3, 5, 7 and 9 (Centre for Adolescent Health, Murdoch Children's Research Institute 2018). (See Figure 2 below).



**Figure 2: Relationship between NAPLAN and vulnerability**

Poor literacy and numeracy contribute to leaving school early. Of the 22 per cent of children who were developmentally vulnerable in 2012, 9.7 per cent did not finish school. Researchers estimate that up to one in 10 children who are developmentally vulnerable are not fully engaged in work or study at 24 years of age (Lamb et al. 2015). Adults who are not in education or employment are more than twice as likely to have poor health than working adults, with 57.3 per cent of males who are disengaged having poor health compared to 24.6 per cent of the total male working-age population (Lamb and Huo 2017).

## What helps and what hinders healthy child development?

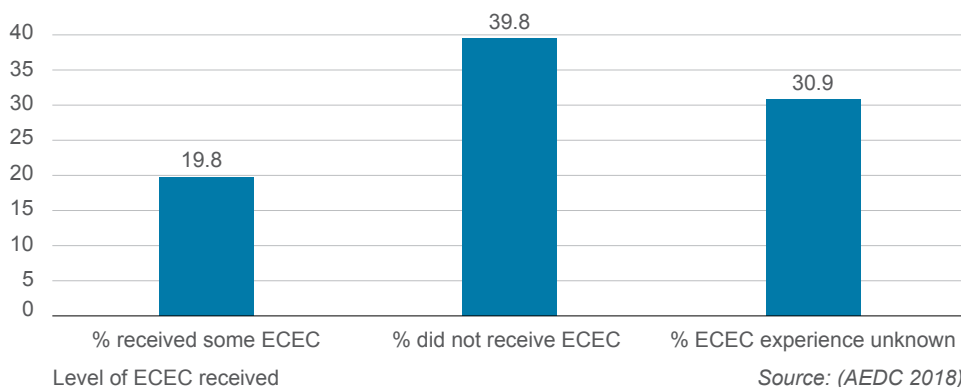
Children can face a range of risk factors in their development, such as a lack of healthy food, family stress and unstable accommodation. The effects of trauma and stress in the early years – on the brain, and on later life outcomes – have been empirically validated through the important Adverse Childhood Experiences (ACE) Study (Felitti et al. 1998). The presence of risk factors can increase a child's chances of an adverse development or later life problem, such as disengaging from school, developing a disease, being incarcerated, or becoming homeless (Fox et al. 2015).

We know that children need a range of things to thrive, including relationships with supportive adults, places to play, clean air, and good nutrition. The presence of more than one protective factor can reduce risks to development. Importantly, research shows that safe, loving parents and caregivers, nurturing home environments and high-quality early learning experiences can provide the important stimulation for brain development in the years from zero to five, to help change the otherwise predictable trajectories resulting from the experience of risk factors (Fox et al. 2015).

### How does early childhood education and care help?

ECEC supports children's development in each of the five AEDC domains. Children attending ECEC build social and emotional skills that support them to build and sustain their focus and attention (Rhoades et al. 2011). High-quality ECEC in the first three years of life has been shown to produce cognitive, social and emotional, and language benefits for children, and most particularly children who have existing vulnerabilities (Melhuish et al. 2015, Sammons et al. 2014).

Data for Figure 3 (below) are drawn from the 2018 AEDC census. Those data illustrate the association between developmental vulnerability and attending ECEC. Twice as many children who did not receive ECEC experienced vulnerability than children who did receive ECEC (AEDC 2018). This highlights the important role that ECEC can play in supporting children to stay on track.



**Figure 3: Percentage of children developmentally vulnerable, by ECEC status, 2018**

These results are replicated for Indigenous children, with research showing that ECEC attendance leads to fewer developmental problems upon school entry, as well as children having higher pro-social scores and being more likely to be happy at school (Holzinger and Biddle 2015).

AEDC research found a positive association between attendance at ECEC services and several developmental outcomes. The evidence was less clear on the specifics of quality, hours, and ages of participation in ECEC, but it did suggest that this universal service could benefit many children (Sincovich et al. 2020).

The evidence is clearer for early years preschool programs and their benefits for literacy and numeracy skills. In 2021, 84.7 per cent of children were enrolled in a preschool program in the year before formal school (SCRGSP 2022). Data show that children who attend preschool are more likely to have stronger literacy and numeracy skills; these skills support their readiness for school. A recent Australian study looked at links between preschool attendance and language and cognitive skills. It found that, after accounting for differences in background and characteristics, children attending preschool were rated more than 8 percentage points higher in language and cognitive skills and in communication and general knowledge (Lamb et al. 2020). These skills are essential for literacy and numeracy, which in turn are the building blocks of learning in school. This study of Australian children supports extensive overseas evidence of the value of ECEC for children's outcomes (Sammons et al. 2014; Barnett et al. 2013, Fox and Geddes 2016).

Evidence is also building on the benefits of preschool for younger children. After adjustment for variables that influence development, children who had started attending preschool from three years of age had significantly lower risk of being developmentally vulnerable in the language and cognitive skills AEDC domain than children who had only attended preschool from four years of age (Sincovich et al. 2020).

The early years have been identified as a crucial time in which to intervene to benefit life outcomes, and not acting to protect children and provide good foundations is costly (Heckman 2008). Once children fall behind in their learning, they are likely to remain behind; gaps in children's performance levels stay mostly constant after eight years of age. The influence of school environments in reducing these differences after this age is small (AEDC 2019a). It is clear that universal ECEC has an important role to play in keeping all children on track to thrive.

Overseas research, such as the decades-long Perry Preschool study, shows that children experiencing disadvantage who attend high-quality early learning programs benefit significantly. In turn, societies enjoy considerable returns on their investment in such programs: reduced welfare costs, increased employment, greater tax revenues, and less crime (The Front Project 2021).





## 2. Child developmental vulnerability: our current state

### National trends

The most recent data from 2021 (Table 1 below) show that, although some progress has been made since 2009, on average, one in five children (22.0 per cent) are developmentally vulnerable, and around half of these children (11.4 per cent of all children) are vulnerable in more than one domain. Further to this, some locations and some sub-populations are at far greater risk – more than double the rates of this national average.

#### Key facts

- Overall, children in Australia were faring better in 2021 than when the AEDC began in 2009. In 2021, 22.0 per cent of children were experiencing developmental vulnerability compared to 23.6 per cent in 2009.
- However, children were faring less well in 2021 (22.0 per cent developmentally vulnerable) than they were in 2018 (21.7 per cent developmentally vulnerable).
- Similarly, a greater percentage of children are developmentally on track in all five domains in 2021 (54.8 per cent) than in 2009 (50.7 per cent), although there has been a significant decrease between 2018 (55.4 per cent) and 2021.
- Where you live makes a difference:
  - Nearly half (46.2 per cent) of all children from very remote areas, and more than one-quarter (26.4 per cent) of children from outer regional areas are developmentally vulnerable, compared to one in five (20.8 per cent) of children in major cities.
  - One in three (33.2 per cent) children from the lowest socio-economic communities (most disadvantaged quintile) are developmentally vulnerable, compared to one in seven (14.9 per cent) in the highest socio-economic communities (most advantaged quintile).
- Cultural background also makes a difference:
  - Aboriginal and Torres Strait Islander children record double the rates of developmental vulnerability (42.3 per cent) of non-Aboriginal or Torres Strait Islander children (20.6 per cent). This rate has decreased from 2009, when 47.4 per cent of Aboriginal and Torres Strait Islander children were assessed as developmentally vulnerable.
  - More than 90 per cent of children from language backgrounds other than English (LBOTE) who are not proficient in English are developmentally vulnerable, compared to 17.8 per cent of children from LBOTE backgrounds who are proficient in English, and 20.8 per cent of English-only speaking children.
- Results vary between the five domains:
  - Since 2009, the percentage of children experiencing developmental vulnerability has increased significantly in two domains: physical health and wellbeing, and social competence. Since 2018, this increase is evident in three domains: physical health and wellbeing, language and cognitive skills, and communication skills and general knowledge.
  - The percentage of children experiencing developmental vulnerability has decreased significantly since 2009 in three domains: emotional maturity, language and cognitive

skills, and communication skills and general knowledge. Compared with 2018, fewer children are experiencing developmental vulnerability in social competence, and there has been no change in the levels of vulnerability in emotional maturity.

**Table 1: Percentage of children developmentally vulnerable**

	2009	2012	2015	2018	2021	Change in developmental vulnerability between 2009 and 2021	Change in developmental vulnerability between 2018 and 2021
Physical health and wellbeing	9.3	9.3	9.7	9.6	9.8	Significant increase	Significant increase
Social competence	9.5	9.3	9.9	9.8	9.6	Significant increase	Significant decrease
Emotional maturity	8.9	7.6	8.4	8.4	8.5	Significant decrease	No significant change
Language and cognitive skills (school-based)	8.9	6.8	6.5	6.6	7.3	Significant decrease	Significant increase
Communication skills and general knowledge	9.2	9.0	8.5	8.2	8.4	Significant decrease	Significant increase
Vulnerable in one or more domains	23.6	22.0	22.0	21.7	22.0	Significant decrease	Significant increase
Vulnerable in two or more domains	11.8	10.8	11.1	11.0	11.4	Significant decrease	Significant increase
Developmentally on track	50.7	53.6	54.2	55.4	54.8	Significant increase	Significant decrease

*Notes: the change in developmental vulnerability is green when it is favourable and red when it is unfavourable.*

*'Significant' refers to a statistically significant difference between values, as determined and calculated by the AEDC.*

Each domain is important, but the two domains of language and cognitive skills (school-based) and communication skills and general knowledge are strongly related to academic achievement (Lamb et al. 2015).

In every domain, boys fare worse than girls. However, two domains where gaps on gender are the greatest – social competence and emotional maturity – have less effect on longer-term school outcomes (Lamb et al. 2015; AEDC 2014).

Children from a language background other than English fare worse in three domains than do children who speak English only: social competence, language and cognitive skills, and communication skills and general knowledge. Differences in the percentage of children experiencing vulnerability by language background are discussed later, as they are heavily influenced by proficiency in English.

The following discussion presents the most salient facts for each developmental domain and provides more detail on the results for these sub-groups, including highlighting locations where risk is highest. Differences in two important demographics – gender, and language background other than English – are highlighted when they are particularly significant for a domain. Other demographic factors, such as socio-economic status, regionality and Aboriginal and Torres Strait Islander background, are reported on for every domain, because they can be associated with phenomena such as racism or trauma that significantly contribute to child vulnerability.

## How children are faring across the developmental domains

### Physical health and wellbeing

Children learn best when they are healthy, independent, and physically ready for each day. This domain reflects children's physical readiness for the school day, physical independence and gross and fine motor skills.



#### On track might look like...

Sienna arrives at school on time, well fed and eager to learn. She uses the same hand for most activities. She enjoys painting, climbing and running. Sienna is independent – she can open her lunchbox, pack her bag and take her jacket on and off as she needs to.



#### Developmentally vulnerable might look like...

Sarah is often late to school. By the time she arrives she has missed the discussion of the daily routine, so she is already behind. She sometimes forgets to wear a jumper and is tired and hungry on arrival. Sarah struggles to focus and stay awake at times. Her fine motor skills aren't yet well developed, so she spends a long time trying to undo her buttons, cannot hold a pencil and has difficulty opening her lunchbox.

### Key facts about Australian children's physical health and wellbeing (AEDC 2022):

- In this domain, 28,341 children (9.8 per cent) are developmentally vulnerable, up from 9.3 per cent in 2009.
- More children are developmentally vulnerable in:
  - low socio-economic areas (16.1 per cent) than in high socio-economic areas (6.3 per cent)
  - very remote areas (23.6 per cent) than in major cities (8.9 per cent).
- More Aboriginal and Torres Strait Islander children are developmentally vulnerable (21.9 per cent) than non-Aboriginal or Torres Strait Islander children (9.0 per cent).
- A similar percentage of children from language backgrounds other than English (9.6 per cent) and English-only backgrounds (9.9 per cent) are vulnerable.
- Boys (12.8 per cent) are more vulnerable than girls (6.8 per cent).

This is one of the two domains that have shown an increase in developmental vulnerability between 2009 and 2021. The geographical areas with the highest rates of vulnerability in each state and territory are shown in Table 2. There is considerable variation between locations.

**Table 2: Physical health and wellbeing vulnerability (regions of highest vulnerability)**

The 10 regions in each state and territory with highest rates of vulnerability			
Region	%	Region	%
<b>New South Wales</b>	<b>9.4</b>	<b>Western Australia</b>	<b>9.4</b>
Bourke – Cobar – Coonamble	25.2	Kimberley	24.6
Tumut – Tumbarumba	16.4	East Pilbara	18.7
Inverell – Tenterfield	15.9	Wheat Belt – South	18.3
Upper Hunter	15.8	Kwinana	15.1
Bathurst	15.5	Goldfields	15.1
Dubbo	14.9	Wheat Belt – North	13.5
Richmond Valley – Hinterland	14.7	Mid West	12.6
Mount Druitt	14.5	Gosnells	12.5
Lower Hunter	14.3	Bunbury	12.5
Lower Murray	14.2	Albany	11.1
<b>Victoria</b>	<b>8.1</b>	<b>Tasmania</b>	<b>11.1</b>
Maryborough – Pyrenees	14.9	Brighton	20.9
Latrobe Valley	14.6	Central Highlands (Tas.)	17.8
Campaspe	14.3	West Coast	17.2
Loddon – Elmore	13.8	Sorell – Dodges Ferry	14.7
Murray River – Swan Hill	12.9	Huon – Bruny Island	13.8
Baw Baw	12.4	Burnie – Ulverstone	11.9
Gippsland – South West	12.1	Hobart – North West	11.6
Tullamarine – Broadmeadows	11.9	North East	11.0
Shepparton	11.9	Devonport	10.9
Moreland – North	11.7	Launceston	10.7
<b>Queensland</b>	<b>11.6</b>	<b>Northern Territory*</b>	<b>18.3</b>
Tablelands (East) – Kuranda	19.8	Barkly	46.7
Outback – South	19.0	Alice Springs	25.4
Burnett	17.9	Katherine	22.5
Far North	17.8	East Arnhem/Daly – Tiwi – West Arnhem	19.2
Bundaberg	17.7	Palmerston	18.8
Whitsunday	17.6	Litchfield	14.1
Beaudesert	16.6	Darwin Suburbs	12.5
Hervey Bay	16.3	Darwin City	9.6
Caboolture	16.2	<i>* Fewer than 10 regions with data available</i>	
Rockhampton	16.1		
<b>South Australia</b>	<b>10.7</b>	<b>Australian Capital Territory*</b>	<b>12.8</b>
Outback – North and East	18.3	Belconnen	16.0
Lower North	17.0	Tuggeranong	15.4
Playford	16.6	Gungahlin	12.3
Murray and Mallee	15.3	South Canberra	11.7
Mid North	14.8	North Canberra	10.6
Gawler – Two Wells	13.5	Molonglo	10.2
Fleurieu – Kangaroo Island	13.4	Weston Creek	7.6
Eyre Peninsula and South West	12.3	Woden Valley	7.6
Salisbury	12.3	<i>* Fewer than 10 regions with data available</i>	
Limestone Coast	11.8		



## Social competence

Children do well in social settings when they are confident, are happy to try new things, and can get along with their peers. This domain reflects children's overall social competence, responsibility and respect, approach to learning, and readiness to explore new things.



### On track might look like...

Max has settled well into school and enjoys working in groups with a range of children. He likes playing games and reading books. He listens to his teachers and asks questions politely when he needs to. He also helps others at his table when they have problems. At lunchtime Max plays a range of games with friends.



### Developmentally vulnerable might look like...

Michael dislikes changes to routines and is very unsettled if a different teacher is in the classroom for a day. He gets angry and sad when his favourite teacher is not around, and often hides in a corner or under a table. Michael has difficulty following instructions and does not interact with his peers or express curiosity about the world.

### Key facts about Australian children's social competence (AEDC 2022):

- In this domain, 27,788 children (9.6 per cent) are developmentally vulnerable, up from 9.5 per cent in 2009.
- More children are developmentally vulnerable in:
  - low socio-economic areas (15.1 per cent) than in high socio-economic areas (6.4 per cent)
  - very remote areas (22.0 per cent) than in major cities (9.1 per cent).
- More Aboriginal and Torres Strait Islander children (19.5 per cent) are developmentally vulnerable than non-Aboriginal or Torres Strait Islander children (9.0 per cent).
- A higher percentage of children from language backgrounds other than English (10.5 per cent) are developmentally vulnerable than children from English-only backgrounds (9.3 per cent).
- Boys are more vulnerable (13.5 per cent) than girls (5.8 per cent).

This is one of the two domains that have shown an increase in the percentage of children experiencing developmental vulnerability between 2009 and 2021, although there has been a significant decrease since 2018. The geographical areas with the highest rates of vulnerability in each state and territory are shown in Table 3. There is considerable variation between locations.

**Table 3: Social competence domain, vulnerability, 2021**

The 10 regions in each state and territory with highest rates of vulnerability			
Region	%	Region	%
<b>New South Wales</b>	<b>9.4</b>	<b>Western Australia</b>	<b>7.6</b>
Bourke – Cobar – Coonamble	18.8	Kimberley	15.7
Lower Murray	16.8	Kwinana	14.0
Norfolk Island	16.7	Gosnells	11.6
Kempsey – Nambucca	16.5	Christmas Island/Cocos (Keeling) Islands	11.5
Bathurst	15.7	East Pilbara	11.3
Merrylands – Guildford	13.8	Goldfields	11.1
Lower Hunter	13.8	Wheat Belt – North	10.0
Griffith – Murrumbidgee (West)	13.6	Wheat Belt – South	9.8
Liverpool	13.5	Armadale	9.7
Taree – Gloucester	13.0	Mid West	9.2
<b>Victoria</b>	<b>9.0</b>	<b>Tasmania</b>	<b>9.3</b>
Campaspe	17.7	South East Coast	20.9
Moreland – North	16.0	Brighton	14.8
Tullamarine – Broadmeadows	15.2	Devonport	11.8
Latrobe Valley	14.2	Hobart – North West	11.6
Gippsland – South West	14.2	Burnie – Ulverstone	10.1
Loddon – Elmore	13.8	North East	9.9
Brimbank	13.2	Huon – Bruny Island	9.4
Maryborough – Pyrenees	12.9	West Coast	9.1
Dandenong	12.8	Launceston	8.6
Sunbury	11.9	Central Highlands (Tas.)	8.5
<b>Queensland</b>	<b>10.6</b>	<b>Northern Territory*</b>	<b>21.7</b>
Far North	16.8	Barkly	65.3
Burnett	15.8	East Arnhem/Daly – Tiwi – West Arnhem	29.5
Beaudesert	15.3	Katherine	28.2
Tablelands (East) – Kuranda	15.3	Alice Springs	26.1
Innisfail – Cassowary Coast	15.0	Litchfield	19.7
Nundah	14.5	Palmerston	18.8
Ipswich Inner	14.4	Darwin Suburbs	14.4
Browns Plains	14.4	Darwin City	12.5
Cairns – South	14.4	<i>* Fewer than 10 regions with data available</i>	
Rockhampton	14.3		
<b>South Australia</b>	<b>11.2</b>	<b>Australian Capital Territory*</b>	<b>12.2</b>
Playford	17.5	Tuggeranong	15.1
Lower North	17.0	Belconnen	14.6
Mid North	16.1	Molonglo	13.6
Outback – North and East	15.1	South Canberra	11.3
Murray and Mallee	15.0	Gungahlin	11.3
Salisbury	14.1	Weston Creek	11.3
Gawler – Two Wells	13.5	Woden Valley	9.1
Fleurieu – Kangaroo Island	12.4	North Canberra	6.0
Eyre Peninsula and South West	11.6	<i>* Fewer than 10 regions with data available</i>	
Limestone Coast	11.1		

## Emotional maturity

Children adapt best to a classroom environment when they can consider others, concentrate, have patience and are beginning to manage their emotions. This domain reflects children's pro-social and helping behaviours, absence of anxious and fearful behaviour, aggressive behaviour, and hyperactivity and inattention.



### On track might look like...

Ruby enjoys playing group activities and is patient in waiting her turn. At lunchtime she can be seen comforting children who have fallen over, and often invites children who are on their own to join with her friends. Some things scare Ruby, but she is learning to manage her fears, and talks to her parents or teachers if she needs some extra support. Ruby enjoys coming to school.



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### Developmentally vulnerable might look like...

Remi struggles to leave her mum at the start of the school day. She remains upset after her mum leaves the classroom. Remi does not seem to notice when other children need help. She is distracted in class and has trouble focusing on a given task. Remi is finding school difficult and unenjoyable, and doesn't attend every day.

### Key facts about Australian children's emotional maturity (AEDC 2022):

- In this domain, 24,271 children (8.5 per cent) are developmentally vulnerable, down from 8.9 per cent in 2009.
- More children are developmentally vulnerable in:
  - low socio-economic areas (12.3 per cent) than in high socio-economic areas (6.0 per cent).
  - very remote areas (17.7 per cent) than in major cities (7.8 per cent).
- More Aboriginal and Torres Strait Islander children (16.5 per cent) are developmentally vulnerable than non-Aboriginal or Torres Strait Islander children (7.9 per cent).
- Children from non-English speaking backgrounds (7.6 per cent) are less likely to be developmentally vulnerable than children who only speak English (8.8 per cent).
- Boys are more likely to be developmentally vulnerable (12.9 per cent) than girls (3.9 per cent).
- Since 2009 there has been a significant decrease in the percentage of children experiencing developmental vulnerability on this domain, and no change from 2018.

This domain has shown a decrease in the percentage of children experiencing developmental vulnerability from 2009 to 2021, and has remained stable between 2018 and 2021. The geographical areas with the highest rates of vulnerability on this domain in each state and territory are shown in Table 4. There is considerable variation between locations.

**Table 4: Emotional maturity vulnerability (regions of highest vulnerability)**

The 10 regions in each state and territory with highest rates of vulnerability			
Region	%	Region	%
<b>New South Wales</b>	<b>7.3</b>	<b>Western Australia</b>	<b>7.8</b>
Lower Murray	18.0	Kimberley	15.9
Bourke – Cobar – Coonamble	14.3	Gascoyne	12.5
Taree – Gloucester	13.4	Kwinana	12.4
Norfolk Island	12.5	East Pilbara	10.3
Dapto – Port Kembla	12.3	Wheat Belt – South	10.2
Kempsey – Nambucca	11.7	Goldfields	10.2
Richmond Valley – Hinterland	11.7	Gosnells	9.7
Inverell – Tenterfield	11.5	Kalamunda	9.5
Upper Hunter	10.7	Albany	9.3
South Coast	10.2	Mid West	9.3
<b>Victoria</b>	<b>7.7</b>	<b>Tasmania</b>	<b>10.3</b>
Baw Baw	13.3	South East Coast	16.3
Maryborough – Pyrenees	12.4	Brighton	14.5
Wangaratta – Benalla	11.5	West Coast	12.9
Latrobe Valley	11.4	Devonport	12.7
Shepparton	11.2	Hobart – North West	12.5
Campaspe	10.9	Huon – Bruny Island	12.4
Grampians	10.9	Sorell – Dodges Ferry	10.8
Tullamarine – Broadmeadows	10.8	Launceston	10.5
Glenelg – Southern Grampians	10.8	North East	10.2
Wellington	10.7	Central Highlands (Tas.)	10.1
<b>Queensland</b>	<b>10.0</b>	<b>Northern Territory*</b>	<b>17.7</b>
Caboolture	15.9	Barkly	25.3
Beauresert	15.2	Alice Springs	24.8
Far North	14.4	East Arnhem/Daly – Tiwi – West Arnhem	23.7
Cairns – South	14.3	Katherine	21.6
Hervey Bay	14.1	Palmerston	17.5
Nundah	13.7	Litchfield	16.5
Rockhampton	13.6	Darwin Suburbs	11.6
Strathpine	13.5	Darwin City	9.9
Tablelands (East) – Kuranda	13.5	<i>* Fewer than 10 regions with data available</i>	
Whitsunday	13.1		
<b>South Australia</b>	<b>10.3</b>	<b>Australian Capital Territory</b>	<b>10.6</b>
Playford	14.9	Belconnen	12.3
Murray and Mallee	14.9	Tuggeranong	11.9
Mid North	14.8	Gungahlin	10.7
Fleurieu – Kangaroo Island	14.4	Molonglo	9.7
Lower North	14.3	North Canberra	9.1
Outback – North and East	13.8	South Canberra	8.0
Barossa	13.7	Weston Creek	7.6
Adelaide City	12.2	Woden Valley	7.6
Onkaparinga	11.7	<i>* Fewer than 10 regions with data available</i>	
Salisbury	11.6		



## Language and cognitive skills (school-based)

Children love to learn new things at school when they have developed an early interest in reading and counting and can recognise numbers and shapes. This domain reflects children's basic literacy, advanced literacy, basic numeracy, and interest in literacy, numeracy and memory.



### On track might look like...

Kai often flips through books, turning the pages and looking at the pictures. He has started taking readers home from school and is able to read simple words. He writes his own name and is starting to write his friends' names. Kai likes playing number games like bingo and can confidently count to 20. Kai can follow the class routine and has a good sense of time concepts, such as before and after.



### Developmentally vulnerable might look like...

Luca does not know most of the letters of the alphabet or the sounds they make. Luca is not interested in books, and is still learning the correct way to hold them. He does not understand how to rhyme. Luca can count to five but cannot relate numbers to actual objects yet. When attempting to write, Luca starts at the right-hand side of the page and moves to the left. Luca can write the first letter of his name.

### Key facts about Australian children's language and cognitive skills (AEDC 2022):

- In this domain, 21,107 children (7.3 per cent) are developmentally vulnerable, down from 8.9 per cent in 2009.
- More children are developmentally vulnerable in:
  - low socio-economic areas (14.0 per cent) than in high socio-economic areas (3.2 per cent).
  - very remote areas (29.4 per cent) than in major cities (6.4 per cent).
- More Aboriginal and Torres Strait Islander children (22.5 per cent) are developmentally vulnerable than non-Aboriginal or Torres Strait Islander children (6.3 per cent).
- A higher percentage of boys (8.7 per cent) are developmentally vulnerable than girls (6.0 per cent).
- A higher percentage of children from a language background other than English (8.7 per cent) are developmentally vulnerable than children from an English-only background (6.8 per cent).

This domain is one of the three domains that have shown a decrease between 2009 and 2021 in the percentage of children experiencing developmental vulnerability, although there has been a significant increase since 2018. The geographical areas with the highest rates of vulnerability in each state and territory in this domain are shown in Table 5. There is considerable variation between locations.

**Table 5: Language and cognitive skills domain (school-based), vulnerability, 2021**

The 10 regions in each state and territory with highest rates of vulnerability			
Region	%	Region	%
<b>New South Wales</b>	<b>6.2</b>	<b>Western Australia</b>	<b>7.2</b>
Bourke – Cobar – Coonamble	19.5	Kimberley	23.7
Lower Murray	16.7	Gascoyne	16.9
Broken Hill and Far West	14.4	East Pilbara	16.3
Mount Druitt	13.9	Mid West	13.2
Taree – Gloucester	13.0	Goldfields	12.1
Inverell – Tenterfield	13.0	Wheat Belt – North	11.5
Kempsey – Nambucca	12.9	Kwinana	11.4
South Coast	10.7	Albany	10.9
Merrylands – Guildford	10.4	West Pilbara	9.9
Upper Hunter	10.2	Gosnells	9.8
<b>Victoria</b>	<b>7.2</b>	<b>Tasmania</b>	<b>9.2</b>
Maryborough – Pyrenees	15.4	South East Coast	18.6
Grampians	12.8	Brighton	17.2
Latrobe Valley	12.1	Central Highlands (Tas.)	14.0
Tullamarine – Broadmeadows	12.1	Hobart – North West	12.0
Brimbank	12.1	Huon – Bruny Island	11.3
Moreland – North	11.6	West Coast	11.3
Shepparton	11.5	Devonport	10.7
Dandenong	11.0	Burnie – Ulverstone	9.9
Loddon – Elmore	10.6	Launceston	9.9
Bendigo	10.6	North East	9.1
<b>Queensland</b>	<b>8.4</b>	<b>Northern Territory*</b>	<b>21.2</b>
Outback – North	20.7	Barkly	53.3
Far North	19.8	East Arnhem/Daly – Tiwi – West Arnhem	46.7
Tablelands (East) – Kuranda	19.4	Katherine	36.0
Port Douglas – Daintree	14.8	Alice Springs	30.7
Burnett	13.7	Palmerston	12.6
Charters Towers – Ayr – Ingham	13.2	Darwin Suburbs	11.4
Browns Plains	12.9	Litchfield	8.4
Strathpine	12.9	Darwin City	6.6
Innisfail – Cassowary Coast	12.8	* Fewer than 10 regions with data available	
Beautesert	12.7		
<b>South Australia</b>	<b>7.9</b>	<b>Australian Capital Territory</b>	<b>6.5</b>
Outback – North and East	25.3	Tuggeranong	8.5
Playford	14.3	Belconnen	8.0
Mid North	12.5	Molonglo	7.4
Eyre Peninsula and South West	12.1	Gungahlin	5.9
Murray and Mallee	10.7	South Canberra	5.0
Lower North	10.6	Weston Creek	5.0
Salisbury	10.1	Woden Valley	4.1
Fleurieu – Kangaroo Island	9.4	North Canberra	3.5
Yorke Peninsula	9.4	* Fewer than 10 regions with data available	
Limestone Coast	9.0		

## Communication skills and general knowledge

Children who are successful learners can communicate their needs and thoughts to adults and other children. This domain reflects children's communication skills and general knowledge, based on broad developmental competencies and skills measured in the school context.



### On track might look like...

Theo enjoys engaging in imaginative play with his friends. He is able to make up stories about the cars he drives around the track. Sometimes he pretends the cars are different objects.

He speaks aloud in a clear voice, and most of his words are easily understood by his peers and teachers. Theo has little difficulty understanding his teachers.



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### Developmentally vulnerable might look like...

Maryam uses objects in a literal play, recreating scenes she has seen on television. She does not engage in imaginative play or tell stories. Maryam often struggles to understand what is being said to her by her teachers. She has difficulty making the right sounds and is often misunderstood by her peers.

### Key facts about Australian children's communication skills and general knowledge (Commonwealth of Australia 2022):

- In this domain, 24,064 children (8.4 per cent) are developmentally vulnerable, down from 9.2 per cent in 2009.
- More children are developmentally vulnerable in:
  - low socio-economic areas (14.5 per cent) than in high socio-economic areas (4.6 per cent).
  - very remote areas (20.9 per cent) than in major cities (8.1 per cent).
- More Aboriginal and Torres Strait Islander children (18.1 per cent) are developmentally vulnerable than non-Aboriginal or Torres Strait Islander children (7.7 per cent).
- A higher percentage of boys (10.6 per cent) than girls (6.1 per cent) are developmentally vulnerable in this domain.
- A higher percentage of children from a language background other than English (14.3 per cent) are developmentally vulnerable than children from an English-only background (6.2 per cent).

This is one of the three domains that have shown a decrease between 2009 and 2021 in the percentage of children experiencing developmental vulnerability, although there has been a significant increase since 2018. The geographical areas with the highest rates of vulnerability in each state and territory in this domain are shown in Table 6. There is considerable variation between locations.

**Table 6: Communication skills and general knowledge domain, vulnerability, 2021**

The 10 regions in each state and territory with highest rates of vulnerability			
Region	%	Region	%
<b>New South Wales</b>	<b>8.4</b>	<b>Western Australia</b>	<b>8.0</b>
Fairfield	16.2	Kimberley	16.4
Bourke – Cobar – Coonamble	16.1	East Pilbara	14.5
Moree – Narrabri	14.0	Gosnells	14.0
Mount Druitt	13.9	Christmas Island/Cocos (Keeling) Islands	11.5
Liverpool	13.8	Kwinana	10.6
Lower Murray	13.6	Canning	10.5
Canterbury	12.7	Goldfields	10.4
Merrylands – Guildford	12.4	Albany	10.3
St Marys	12.4	Wheat Belt – South	10.2
Bankstown	12.0	Armadale	9.8
<b>Victoria</b>	<b>7.4</b>	<b>Tasmania</b>	<b>6.6</b>
Brimbank	15.1	Brighton	12.5
Tullamarine – Broadmeadows	13.9	Launceston	9.0
Dandenong	13.3	West Coast	8.6
Campaspe	13.1	Devonport	7.6
Moreland – North	12.3	Hobart – North West	7.4
Loddon – Elmore	11.7	Burnie – Ulverstone	7.4
Latrobe Valley	10.4	Central Highlands (Tas.)	7.0
Melton – Bacchus Marsh	9.8	South East Coast	7.0
Bendigo	9.7	North East	6.9
Melbourne City	9.5	Hobart – North East	5.5
<b>Queensland</b>	<b>9.1</b>	<b>Northern Territory*</b>	<b>16.8</b>
Far North	18.3	Barkly	42.7
Tablelands (East) – Kuranda	16.7	East Arnhem/Daly – Tiwi – West Arnhem	27.5
Innisfail – Cassowary Coast	14.6	Katherine	21.8
Forest Lake – Oxley	13.9	Alice Springs	19.6
Rockhampton	13.4	Darwin Suburbs	14.4
Springwood – Kingston	13.3	Palmerston	12.9
Granite Belt	13.3	Litchfield	11.6
Burnett	13.0	Darwin City	6.6
Sunnybank	13.0	* Fewer than 10 regions with data available	
Cairns – South	13.0		
<b>South Australia</b>	<b>8.6</b>	<b>Australian Capital Territory</b>	<b>9.2</b>
Lower North	15.1	Molonglo	12.5
Playford	14.4	Belconnen	10.6
Salisbury	13.3	Gungahlin	9.7
Murray and Mallee	11.1	Tuggeranong	9.3
Port Adelaide – West	11.0	Weston Creek	7.9
Eyre Peninsula and South West	10.5	Woden Valley	7.8
Mid North	10.2	North Canberra	6.7
Outback – North and East	9.7	South Canberra	6.3
Port Adelaide – East	9.6	* Fewer than 10 regions with data available	
West Torrens	8.8		



## Who and where are the children most at risk?

### Trends across states, metropolitan and regional areas

Although national trends show improvements overall since 2009, children in Australia continue to experience vulnerability to different degrees. Across states and territories, levels of vulnerability vary from one in five to more than one in three children being developmentally vulnerable in at least one domain (Table 7). Australia's most populous states have the lowest levels of vulnerability. The Northern Territory has far higher rates of developmental vulnerability than other states and territories. Western Australia has seen the greatest levels of improvement over time. In 2021, Victoria became the jurisdiction with the lowest average rates of developmental vulnerability.

**Table 7: Vulnerability rates by state and territory, 2009–2021**

State/Territory	Vulnerability in one or more domains (%)					Vulnerability in two or more domains (%)				
	2009	2012	2015	2018	2021	2009	2012	2015	2018	2021
New South Wales	21.3	19.9	20.2	19.9	21.2	10.3	9.2	9.6	9.6	10.5
Victoria	20.3	19.5	19.9	19.9	19.9	10.0	9.5	9.9	10.1	10.2
Queensland	28.6	26.2	26.1	25.9	24.7	15.8	13.8	14.0	13.9	13.2
South Australia	22.8	23.7	23.5	23.9	23.8	11.5	12.2	12.2	13.0	12.7
Western Australia	24.7	23.0	21.3	19.4	20.3	12.2	11.2	10.5	9.4	10.2
Tasmania	21.8	22.5	21.0	21.5	23.2	10.8	10.1	10.7	10.7	11.9
Northern Territory	38.7	35.5	37.2	35.8	39.2	23.4	20.5	23.1	23.4	25.7
Australian Capital Territory	22.2	22.0	22.5	24.6	26.7	10.9	9.8	10.3	12.4	13.3

Children's level of vulnerability increases the further they live from major cities. Nearly half (46.2 per cent) of all children in very remote Australia are developmentally vulnerable in one or more domains, with more than half of these children (29.6 per cent of all children) vulnerable in two or more domains. These rates are double the vulnerability rates of children in major cities, where 20.8 per cent of children are developmentally vulnerable in one or more domains and 10.5 per cent in two or more domains. This gap is present in all domains, except for language and cognitive skills, where the difference is larger. In very remote areas, children are five times more likely to experience developmental vulnerability than in major cities (Figure 4).

Children in regional areas and remote communities are likely to have poorer access to services that support healthy development, such as early childhood education, and medical and allied health services. However, the variability between locations can reflect many nuances and cultural contexts that serve as protective factors. Table 8 illustrates that higher levels of vulnerability are prevalent in all states and territories.

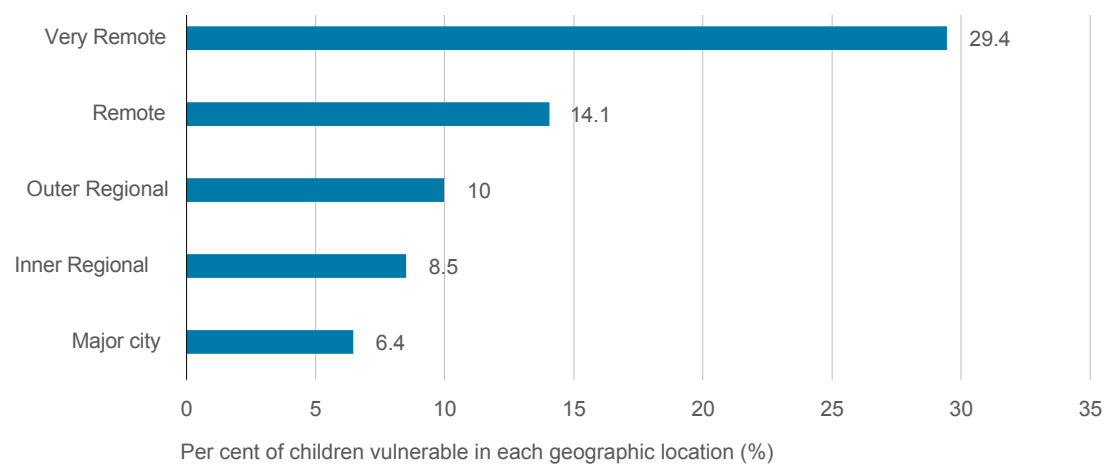


Figure 4: Percentage of vulnerability in language and cognitive skills, by location, 2021



**Table 8: Vulnerability in at least one domain: 10 most vulnerable regions in each state and territory, 2021**

The 10 regions in each state and territory with highest rates of vulnerability			
Region	%	Region	%
<b>New South Wales</b>	<b>21.2</b>	<b>Western Australia</b>	<b>20.3</b>
Bourke – Cobar – Coonamble	41.7	Kimberley	40.9
Broken Hill and Far West	32.2	East Pilbara	31.1
Bathurst	30.1	Kwinana	31.0
Mount Druitt	30.1	Goldfields	28.6
Lower Murray	29.9	Wheat Belt – South	28.2
Inverell – Tenterfield	29.0	Christmas Island/Cocos (Keeling) Islands	26.9
Merrylands – Guildford	28.6	Gosnells	26.9
Kempsey – Nambucca	28.1	Gascoyne	26.3
Fairfield	27.8	Mid West	24.4
Taree – Gloucester	27.3	Albany	24.2
<b>Victoria</b>	<b>19.9</b>	<b>Tasmania</b>	<b>23.2</b>
Campaspe	31.2	Brighton	38.2
Tullamarine – Broadmeadows	29.9	South East Coast	32.6
Brimbank	29.9	Central Highlands (Tas.)	29.5
Maryborough – Pyrenees	28.2	Huon – Bruny Island	28.7
Gippsland – South West	27.0	West Coast	28.0
Dandenong	26.8	Hobart – North West	27.0
Loddon – Elmore	26.6	Devonport	24.3
Moreland – North	26.4	Burnie – Ulverstone	23.6
Latrobe Valley	26.0	Sorell – Dodges Ferry	23.5
Grampians	25.8	Launceston	23.3
<b>Queensland</b>	<b>24.7</b>	<b>Northern Territory*</b>	<b>39.2</b>
Far North	36.0	Barkly	77.3
Burnett	34.1	East Arnhem/Daly – Tiwi – West Arnhem	58.3
Tablelands (East) – Kuranda	33.9	Katherine	52.3
Beaudesert	33.8	Alice Springs	46.1
Hervey Bay	33.1	Palmerston	32.4
Outback – North	33.0	Litchfield	32.1
Rockhampton	32.6	Darwin Suburbs	31.4
Outback – South	32.5	Darwin City	21.7
Browns Plains	32.1	<i>* Fewer than 10 regions with data available</i>	
Cairns – South	32.1		
<b>South Australia</b>	<b>23.8</b>	<b>Australian Capital Territory</b>	<b>26.7</b>
Outback – North and East	34.8	Belconnen	30.5
Playford	33.8	Tuggeranong	30.1
Lower North	32.6	Molonglo	26.1
Mid North	31.5	South Canberra	25.7
Murray and Mallee	30.6	Gungahlin	25.3
Salisbury	29.4	Woden Valley	22.7
Adelaide City	26.5	North Canberra	22.3
Fleurieu – Kangaroo Island	25.7	Weston Creek	20.0
Eyre Peninsula and South West	25.3	<i>* Fewer than 10 regions with data available</i>	
Limestone Coast	25.2		

## Socio-economic status

Socio-economic status plays an unacceptably large role in developmental vulnerability. Each year, about 18,000 children (17,554 or 33.2 per cent in 2021) from the lowest socio-economic communities are assessed as developmentally vulnerable, compared to 8,674 children (14.9 per cent) in the highest socio-economic communities. Children in disadvantaged communities are nearly three times more likely to be developmentally vulnerable in more than one domain than are children in advantaged communities, with developmental vulnerability in two or more domains at 19.1 per cent compared to 6.7 per cent.

Child development outcomes in the most disadvantaged areas are relatively stable. In 2009, 41.6 per cent of children in the most disadvantaged areas were developmentally on track in all five domains. In 2021, 42.7 per cent of children in the most disadvantaged areas were developmentally on track on all domains. The percentage of children experiencing developmental vulnerability in one or more domain rose slightly between 2009 and 2021: from 32.1 to 33.2 per cent. Increases in the percentage of children assessed as both developmentally vulnerable and on track in all five domains are balanced by decreases in the percentage of children assessed as at risk.

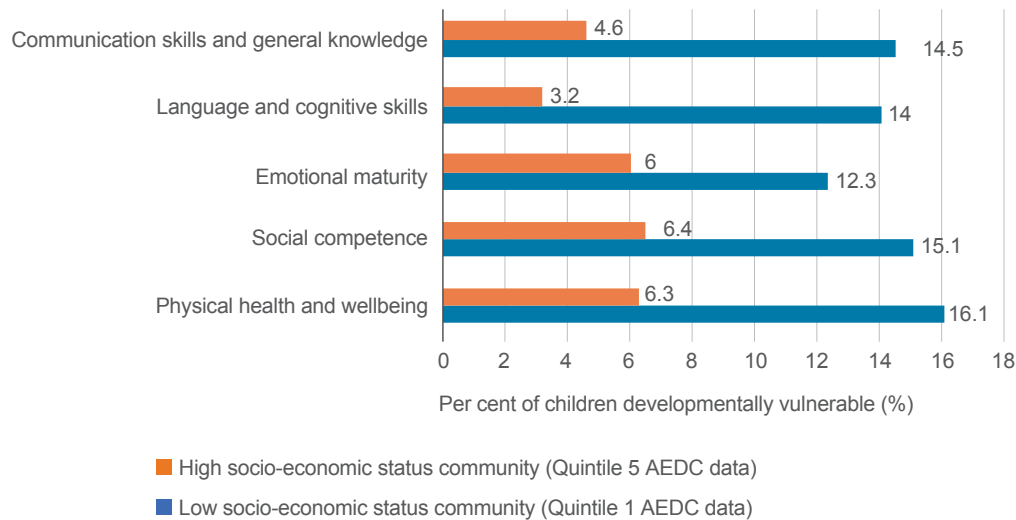
Many children in low socio-economic areas face a range of problems that can hinder their development, including financial and housing insecurity, poor nutrition, and poor parental physical and mental health (Fox et al. 2015). Additionally, they are less likely to have access to high-quality ECEC (Torii et al. 2017).

Children from the lowest socio-economic communities are more than three times more likely to be behind in communication. They experience a range of risk factors and are:

- more likely to struggle to regulate their emotions, to help others, and to hold a pencil or have energy to last the school day.
- less likely to be living in a supportive home learning environment, less likely to have access to a range of books, songs and rhymes, or hear a range of words (Sylva et al. 2004).
- five times more likely to face difficulties expressing themselves, holding books, and recognising letters than are children from the highest socio-economic suburbs.

All of this has a lasting effect on the children's opportunity to experience a successful start to school, be able to understand and respond to instructions, make friends, and feel a sense of belonging.

Figure 5 shows results for the most socio-economically disadvantaged and most advantaged children in each of the five domains in 2021. The domain with the biggest difference is language and cognitive skills, where those in low socio-economic areas are 4.4 times more likely to be developmentally vulnerable than those in more advantaged areas. For the other four domains, the difference is around 2.0 to 3.2 times.

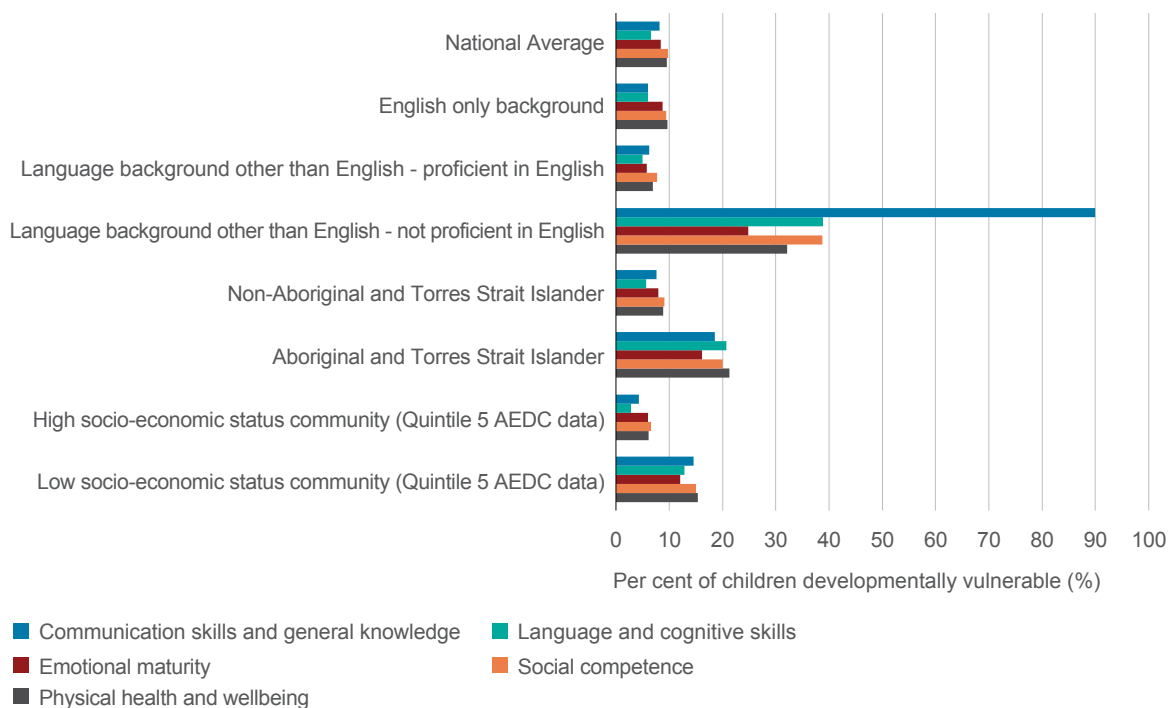


**Figure 5: Developmental vulnerability by socio-economic status, 2021**

Although all communities have children who are developmentally vulnerable, some communities have a far higher percentage of such children than other communities. Poverty and a lack of social and economic opportunities are known to be risk factors for child development and life outcomes. In low socio-economic communities, levels of access to protective factors such as ECEC services and parental engagement in learning can also be dramatically lower, further harming the trajectories for children.

### Population groups at higher risk

Figure 6 shows the results in each of the five domains for key demographics, and illustrates the scale of difference in levels of developmental vulnerability between sub-populations. The groups most at risk of adverse outcomes due to developmental vulnerability are Aboriginal and Torres Strait Islander children; children not proficient in English; and children from low socio-economic communities.



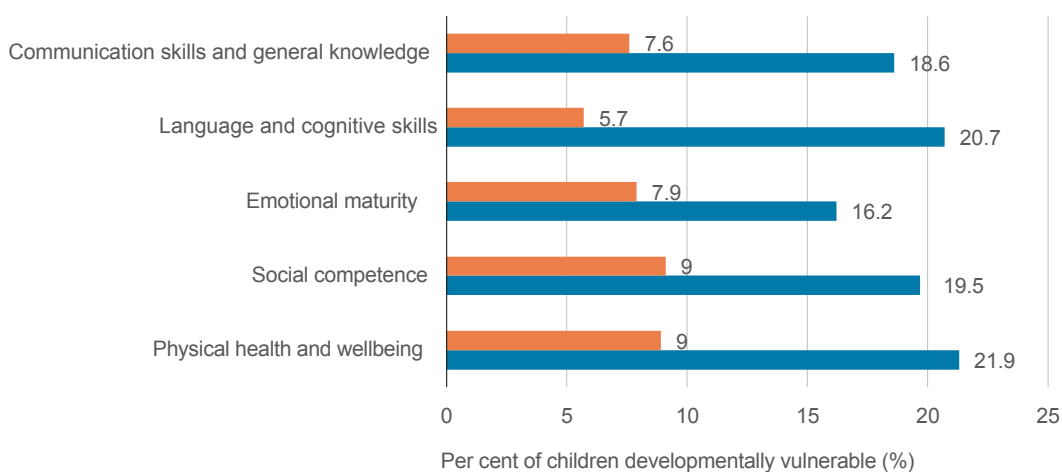
**Figure 6: Vulnerability in all domains, by demographic, 2021**



## Aboriginal and Torres Strait Islander children

Many Aboriginal and Torres Strait Islander children encounter more than one risk factor, including living a socio-economically disadvantaged location, and living outside the major capital cities (thus having poorer access to services and other protective factors). (See box: ‘Profiling child development in the Northern Territory’, above, and Table 8 for more information on locations with higher vulnerability).

Figure 7 illustrates differences between Aboriginal and Torres Strait Islander children and non-Aboriginal and Torres Strait Islander children on each domain. Overall, Aboriginal and Torres Strait Islander children are twice as likely to be developmentally vulnerable in one or more domains (42.3 per cent, compared to 20.6 per cent of non-Aboriginal children), and more than twice as likely to be developmentally vulnerable in two or more domains (26.5 per cent, compared to 0.3 per cent of non-Aboriginal children). Aboriginal and Torres Strait Islander children are at least twice as likely to be behind in each developmental domain.



**Figure 7: Aboriginal and Torres Strait Islander children’s vulnerability, by domain, 2021**

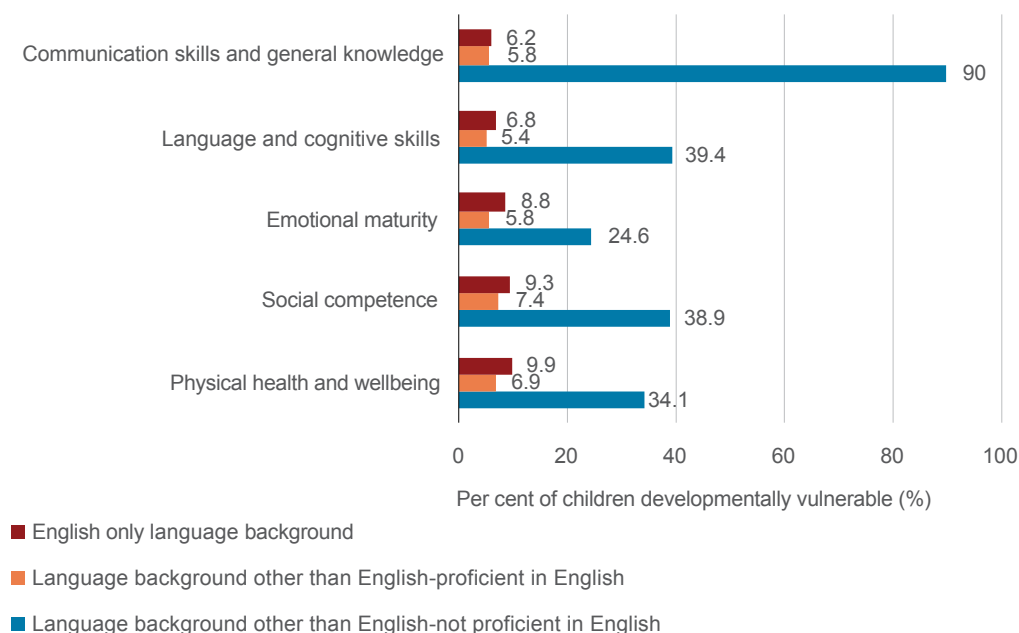
Although the gaps between non-Aboriginal and Torres Strait Islander children and Aboriginal and Torres Strait Islander children are large, improvements are being made over time. Developmental vulnerability has steadily decreased for Aboriginal and Torres Strait Islander children, down from 47.4 per cent in 2009 to 42.3 per cent in 2021.

## Language background other than English

Children from a language background other than English are more likely to be developmentally vulnerable in one or more domains (25.3 per cent) than are children from an English-only language background (20.8 per cent). The main factor affecting children is their proficiency in English (see Figure 8).

A minority of children from a language background other than English are not proficient in English (7,610 out of 77,539 LBOTE children in the census). Most of the children who are not proficient in English (more than 90 per cent) are developmentally vulnerable in the communication skills and general knowledge domain, and many (39.4 per cent) are developmentally vulnerable in the language and cognitive skills domain. This is not surprising: these areas measure language-based abilities that are dependent on a child understanding their teacher, and are not culturally specific. Limited English might also present barriers to developing social and emotional skills and to a range of communications with children's teachers and peers.

It is important to remember that the AEDC is conducted by teachers in a predominantly English-speaking environment. For a child whose background is in a language other than English, their speaking and literacy skills in their first language are not measured in the AEDC, so there may be complex considerations when interpreting the results. The results do not capture, for example, the language capacities that children display at home or in other contexts where their first language is used, and thus where their speaking and literacy skills might be stronger than those displayed to teachers at school.



**Figure 8: Vulnerability according to language background, 2021**

## Children with a disability

Children with diagnosed special needs are included in the AEDC, but their scores are not released separately as part of the reporting, because their significant needs are considered captured by their diagnosis. Although not discussed in this report, the absence of reporting on children with special needs is a limitation that warrants further consideration when assessing the needs of any one community. The lack of specific data on the needs of children with a disability may lead to an underestimation of community vulnerability and need.

### 3. Looking forward

#### Government and communities working together to overcome disadvantage

Growing up in a low socio-economic family or community is one of the most influential risk factors for a child's development – and, in turn, a predictor of poorer life outcomes. This report highlights the stark differences in AEDC development measures between children in the most disadvantaged communities and those in the most advantaged:

- Of children from the lowest socio-economic communities, 33.2 per cent are developmentally vulnerable, compared to 14.9 per cent in the highest socio-economic communities.
- Children in disadvantaged communities are nearly three times more likely to be behind in two or more domains than children in advantaged communities (19.1 per cent compared to 6.7 per cent).

Overcoming poverty and mitigating the harms caused by generational cycles of disadvantage are significant challenges which need to be tackled collaboratively by governments, communities and families. However, AEDC results for some communities over time show that quality universal services such as early education, investment in protective factors, and place-based collective efforts can reduce some of these risk factors within just a few years (AEDC 2017).

AEDC research examined communities that had reduced vulnerability at rates higher than other communities. After ruling out changes in socio-economic and demographic characteristics in the communities, AEDC found that 35 communities (6 per cent of all communities) had substantial drops in developmental vulnerability between 2009 and 2012. The research found a strong association between these improvements and local services and relationships – of schools, childcare, family services, and health services – working together to reduce the risks of local disadvantage.

Looking at local government area data and understanding the domains in which there are strengths or greater vulnerability for children can help unite services and focus government and communities on local needs. This level of insight supports place-based solutions and collective impact approaches to work towards common goals for the local community and help measure real progress for child development over time.

#### COVID-19 may increase children's risk

The impact of the COVID-19 pandemic has increased the pressure on Australian families and the economy, and exacerbated existing levels of community vulnerability. In the future, this may present a significant risk to child development and put further pressure on educational, family and health services to close widening gaps.

Emerging evidence suggests that babies born during the pandemic are more likely to be vulnerable than babies born in non-pandemic times in the domains of fine and gross motor skills, and personal and social skills (Shuffrey et al. 2022). This may be due to pandemic-related distress faced by families, reduced access to supports such as face-to-face visits with maternal and child health nurses, and fewer opportunities for socialisation between new parents and their babies and infants.

Children have been affected by increased stress on families, an upsurge in family violence, and restrictions on child protection agencies supporting children face-to-face during the height of COVID-19 (Harris et al. 2021). Some children may have missed out on ECEC during COVID-19, due to illness, fear of catching COVID-19 and lockdowns, as well as changes in parents' work and economic circumstances. Reports show that families were increasingly using parent-only care, where possible, to avoid the risk of children catching and transmitting COVID-19 (Hand et al. 2020).

Although some children have fared well at home, others are not reaching their social and emotional developmental milestones (Egan et al. 2021). Many children have had preschool disrupted and struggled to settle back into routines following long breaks. Educators have also raised concerns about children's inability to obtain allied health services in person during COVID-19, arguing that already vulnerable children faced additional barriers to learning. Children from language backgrounds other than English lost some of the gains they had made in learning English (CELA 2020).

The 2021 AEDC data show that a higher percentage of Australian children are experiencing developmental vulnerability, and a lower percentage of children are on track in all five domains, than in 2018. The effects of COVID-19 may have contributed to this. However, state-based data do not support the premise that the pandemic has caused a higher percentage of children to be classified as developmentally vulnerable.

COVID-19 caused more disruption in some states than others. But AEDC results from the worst-affected states do not necessarily reflect the level of disruption experienced. For instance, Victoria experienced substantial consequences from COVID-19, yet the percentage of children exhibiting developmental vulnerability remained stable (19.9 per cent in 2018 and 2021), and Victoria achieved the lowest level of developmental vulnerability of all states and territories. Tasmania and the Northern Territory, both of which experienced less disruption from COVID-19, reported a significantly higher percentage of developmentally vulnerable children in 2021 than in 2018 (Tasmania: 23.2 per cent in 2021 compared with 21.5 per cent in 2018; Northern Territory: 39.2 per cent in 2021 compared with 35.8 per cent in 2018). Further, AEDC data do not measure children's exposure to pandemic-related restrictions, or their ability to participate in ECEC, so direct associations cannot be drawn. It is possible that some communities experienced substantial impact from COVID-19 which may be reflected in the per cent of children in that community experiencing developmental vulnerability. However, additional data about the extent of COVID-19 impact are required to verify this hypothesis.

For these reasons, further research is needed into the structural and cultural factors that underpin the changes identified between 2018 and 2021. Potential contributors to the increase in developmental vulnerability that could be further considered include family environment, workforce participation, accessibility of services, and ECEC quality.

### **Helping those who are most at risk, through better access**

Although the national averages in child development may be improving over time, gaps and risks for some groups, and in some developmental domains such as language and cognitive skills, are increasing. Getting beyond the national averages, the detail of the AEDC data shows that there are unacceptable levels of inequity in risks for some children. The circumstances of a child's location and family health and wealth, their distance from major cities, their household and community education levels, and their language spoken at home, can unfairly prevent them from being on track and thriving.

At the same time, the benefits of high-quality early learning and preschool for child development are becoming more evident and widely understood. In particular, the returns on investment in quality programs for the most disadvantaged children are significant: in the order of \$10 and \$17 for every \$1 invested (The Front Project 2021).

However, many vulnerable children do not attend ECEC, have access to lower-quality ECEC only, or attend for fewer hours than more advantaged peers (Lamb and Huo 2017). For example, although 84.7 per cent of children may have been enrolled in a preschool program in their year before formal schooling in 2021, some children are missing out. By comparing the percentage of children in specific population groups within the community to the percentage of those children enrolled in a preschool program, we see that the following groups of children have poorer access to ECEC:

- children from low socio-economic backgrounds (18.8 per cent in community compared to 16.9 per cent in preschool)
- children with a disability (7.6 per cent in community compared to 6.0 per cent in preschool)
- Aboriginal and Torres Strait Islander children (6.1 per cent in community compared to 5.8 per cent in preschool)
- children from language background other than English (20.4 per cent in community compared to 15.3 per cent in preschool) (SCRGSP 2022).

A variety of policy interventions would enable more children to attend high-quality ECEC:

- **Provide two years of education prior to school to all children, and more for those who need it.** Four-year-old preschool has been a policy success story, with nearly all children attending preschool in the year before school even though it is not compulsory. Extending preschool to two years before school, as is already done in Victoria and for select children or locations in other jurisdictions, would give all children an additional opportunity to prepare for formal schooling and would enable early intervention to support children to start alongside their peers. As the Early Years Education Program showed, the most vulnerable children would benefit from intensive ECEC for more hours from an earlier age.
- **Invest in the workforce to build quality in every community.** This includes governments funding the initiatives in the National Workforce Strategy (ACECQA 2021) to ensure that the workforce is built and retained. Professional salaries and conditions are needed to retain early childhood educators, and governments should follow examples set by other industries to create incentives for high-quality staff to work in our most vulnerable communities.
- **Provide targeted support for the inclusion of all children, including through adequately funding the Inclusion Support Program and improve access to high-quality ECEC for those who need it most.** Targeted support is needed to ensure that services are welcoming and accommodating of children who face additional barriers to learning, including through Inclusion Support Funding that is matched to the growing needs of children emerging from the pandemic.

For children whose parents are unemployed, further barriers exist. These include the activity test that limits hours of access based on whether parents work, and the requirement that all families make a co-payment to attend. Increasing the hours of access allowed, and reducing the co-payment, would facilitate attendance by the most vulnerable children, who are most likely to benefit from ECEC. While the COVID-19 pandemic continues, giving services the capacity to waive fees helps families remain enrolled but not attend when community transmission is high.



## Considerations for future rounds of data collection

The Australian Early Development Index (AEDI) is the instrument used to capture data for the AEDC. It is a national population measure that captures children's development across five domains. This instrument is well-validated and has provided a consistent foundation for measuring children's development since the AEDC commenced in 2009, allowing for comparison of findings across years. However, some opportunities to add to the AEDC may be appropriate to consider. These include:

- increasing the focus on children's learning – currently, the AEDI captures data on children's basic literacy and numeracy skills in the language and cognitive skills domain. There may be opportunity to expand the data collected on children's learning or to provide public-facing results that include findings on just those characteristics, separated from other characteristics (such as their interest in books and group reading activities) within that domain. This would also more closely align with Sustainable Development Goal 4.2, particularly indicator 4.2.1: Proportion of children aged 24–59 months who are developmentally on track in health, learning and psychosocial well-being, by sex. Creating greater alignment would allow Australia to more accurately report against this goal.
- The AEDI collects data only in English, via teachers who primarily speak English. This means that children who are not fluent in English may not be appropriately represented in the findings. Incorporating opportunities to assess children who speak languages other than English may provide greater insight into their learning and development.
- Family-level indicators of socioeconomic position are collected (such as parental education levels). However, AEDC results typically use area level indicators derived from the Socioeconomic Index for Areas (SEIFA) that use community-level data to determine a child's socioeconomic position. Applying family-level socioeconomic indicators may provide more insight into associations between children's family characteristics and their learning and developmental outcomes.
- Children who attend ECEC receive education and care aligned with the Early Years Learning Framework (EYLF) or another approved Framework. The EYLF includes five learning outcomes. The AEDI captures data that align across some of those outcomes, such as children's ability to communicate. However, in the EYLF, the communication outcome contains all the ways children communicate, including through their use of language. Communication and language are separated in the AEDI, adding complexity to interpretation and understanding of results. The AEDI also does not closely align with all five EYLF outcomes. It may be appropriate to investigate greater alignment between the EYLF outcomes and the domains captured by the AEDI to ensure that children are assessed in the areas they have received education and care in prior to commencing school. Greater alignment may increase engagement by the ECEC sector with AEDC data. In turn, engagement may facilitate a deeper understanding of how their work with children links to AEDC measures.

## 4. Conclusions

This report demonstrates that in every community there are children who are developmentally vulnerable compared to their peers. Communities that are far from city centres and those of low socio-economic ranking have higher levels of child developmental vulnerability. Aboriginal and Torres Strait Islander children and children not proficient in English are far more likely to face numerous difficulties, due to their higher levels of vulnerability in more than one domain.

Children who start school this way struggle to catch up. It is possible, but requires substantial support, which is not available in every school or community, and incurs tremendous cost. Gaps in development and learning that are present by age eight are not bridged by school systems alone.

Ensuring that all children thrive, everywhere, is important. Every child who is not thriving is a missed opportunity: an opportunity at the individual and community level to support improved development and achievement, to support children to learn in school, to go on to further education and employment. It is also a missed opportunity for the Australian economy and society, because children who continue to face barriers to learning are more likely to suffer from poor health and wellbeing and are less likely to be employed throughout their lives.

A range of supports can help children thrive: safe housing; medical care and good nutrition; antenatal support for families; and universal systems such as ECEC and maternal and child health services. ECEC plays a crucial role – if it is available to all children, and is important in supporting children's development and equity.

In 2022, we are seeing the consequences of COVID-19 across the workforce, with staffing shortages due to a combination of the immediate effects of the pandemic and low levels of skilled immigration. Emerging research shows the effects on the development of babies born during the pandemic, and there is considerable evidence mounting about the disruption to care, diminished family functioning and relationships, and poorer child mental health and wellbeing. The results for children's development are entirely predictable. Data collected for the 2024 AEDC may provide further insight into the impact of the pandemic on children's early development.

Early childhood education and care has a central role to play in the nation's recovery; it can help parents work and can support the development of all Australian children. A well-resourced, supported and accessible early childhood education and care service is critically important to Australia's future.

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## ABOUT THE FRONT PROJECT

The Front Project (TFP) is an independent, national enterprise working to improve quality and create positive change in Australia's early childhood education and care (ECEC) system.

The Front Project works with government, business and the early education sector to address disadvantage, improve outcomes for children, and increase the short and long-term gains for Australia.





[thefrontproject.org.au](http://thefrontproject.org.au)  
[info@thefrontproject.org.au](mailto:info@thefrontproject.org.au)

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