

Australian Early Development Census

Comparing AEDC results over time: 2009 to 2021

Over the past 12 years, data for the Australian Early Development Census (AEDC) has been collected every three years, totalling five data collections (2009, 2012, 2015, 2018 and 2021). The AEDC aims to highlight what is working well and what can be improved or developed to support early childhood development. At a community level, the AEDC can be used to start conversations about whether the available services and supports are meeting the needs of all children and families in the community.

You can view and compare your community's AEDC results from each data collection to examine the changes or trends in child development over time and consider these alongside information about what is changing for families in your community over time.

Where can I access AEDC results?

2021 National Report: National, state and territory results for each year of data collection are presented in the 2021 National Report which can be accessed [here](#).

2021 Community Profiles: To access your community profile, click [here](#). Your community profile will include comparative results from 2009, 2012, 2015, 2018 and 2021, across the five AEDC domains, and summary

indicators. AEDC results for local communities within each community are presented for the past three collections (2015, 2018 and 2021) alongside community, state or territory, and national results, located at the end of the Community Profiles.

AEDC Data explorer: Community AEDC data can be explored for each domain, and summary indicator (DV1, DV2) and can be compared across collections in [tables, maps and graphs](#).

Wellington community

Tables Maps Graphs

DISPLAY: Vulnerable

YEARS: ☐ 2012 ☐ 2015 ☒ 2018 ☐ Compare years

VIEW: Percentage of children ☐ Geographic comparisons ☐ Percentile bands

CONTEXT: Select other indicators

TABLE: Percentage of children developmentally vulnerable in 2018 Domains explained

[Export selected results](#)

Geography	Physical	Social	Emotional	Language	Communication	Vuln 1	Vuln 2
Australia	9.6	9.8	8.4	6.6	8.2	21.7	11.0
NSW	8.5	9.2	6.8	5.2	8.0	19.9	9.6
Wellington	21.2	19.2	6.1	12.1	20.2	41.4	21.2

What can be compared?

The AEDC results are reported as the number and percentage of children who are developmentally 'vulnerable', 'at risk' and 'on track', across five key areas of development referred to as domains, these include: physical health and wellbeing, social competence, emotional maturity, language and cognitive skills (school-based), and communication and general knowledge skills. In 2009, a set of cut off scores were developed to categorise children into 'vulnerable', 'at risk' and 'on track' on each domain. These cut off scores remain fixed over time providing a reference point against which AEDC results from later collections can be compared¹. AEDC results for each of these indicators (vulnerable, at risk, and on track) across each domain can be compared over time.

In addition, the AEDC results are presented for three summary indicators: the percentage of children who are developmentally vulnerable on one or more domains (DV1), developmentally vulnerable on two or more domains (DV2) and on track on all 5 domains (OT5).

In 2009, 23.6% of Australian children were developmentally vulnerable on 1 or more domains of the AEDC. In 2018, this figure had dropped to 21.7%. This indicates that there was a reduction in the level of developmental vulnerability of Australian children at the national level of 1.9 percentage points.

Given that more than 250,000 children participate in the AEDC collection each cycle, we can be very confident that there has been a significant improvement in child development at the national level from 2009 to 2018.

In 2009, 43.3% of children in the community of Wellington (NSW) were developmentally vulnerable on 1 or more domains of the AEDC. In 2018, this dropped to 41.4%. This indicates that there was a reduction in the level of developmental vulnerability in Wellington of 1.9 percentage points.

Given that less than 100 children participated in the AEDC collection each cycle in this community, we need to be cautious about concluding that there has been significant improvement in child development from 2009 to 2018.

Why do I need to be cautious when interpreting changes over time in small communities?

When a community is small, it only takes a change in a few children to have a big impact on the percentage of children who are identified as 'vulnerable', 'at risk' or 'on track'. In larger communities, these types of differences are 'washed out' by the larger number of children making patterns and changes over time more evident.

Gregory Village (20 Kids)

2009: $2/20 = 10\%$ of children vulnerable

2021: $4/20 = 20\%$ of children vulnerable

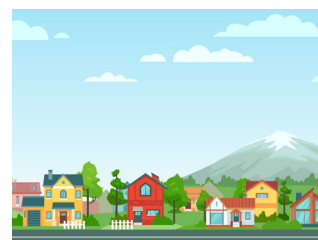
Two additional children vulnerable
= 10 percentage point shift in vulnerability

Brinkman Town (200 Kids)

2009: $20/200 = 10\%$ of children vulnerable

2021: $22/200 = 11\%$ of children vulnerable

Two additional children vulnerable
= 1 percentage point shift in vulnerability



In the fictional example above, both communities only had two more children with developmental vulnerabilities in 2021 compared to 2009. However, in Brinkman Town, this represents a small increase of 1 percentage point in the level of developmental vulnerability because there are 200 children. In Gregory Village, where there are just 20 children, two additional children lead to a large shift of 10 percentage points.

¹ Please see the [Understanding the AEDC Results fact](#) sheet for more information.

² The critical difference focuses on the change in 'percentage points' not 'percentage'. For example, an increase in the percentage of children developmentally vulnerable from 10% to 20% represents an increase of 10 percentage points (i.e., $20 - 10 = 10$), and an increase of 100% ($20/10 = 10/10 = 100\%$).

How can I tell if the changes in AEDC results in my community represent a significant shift in child development?

Almost all communities will see changes in the AEDC results across data collections. In some cases, this difference will be small and in others it will be larger. A tool called the 'critical difference' has been developed to help communities understand whether changes over time in their AEDC results represent a significant shift in child development.

What is the 'Critical Difference?'

The critical difference is the minimum level of change, in percentage points², required between any data collection period (2009, 2012, 2015, 2018 & 2021) for the results to be significant.

The critical difference will vary depending on the number of children in your community and the AEDC outcome of interest (vulnerable, at risk or on track on an individual domain, DV1, DV2, or OT5). The calculation of the critical differences incorporates variation in the way that teachers complete the AEDC, which tends to 'wash out' in large communities but can have an impact in smaller communities.

On the AEDC website, there is a [Comparative Results Tool](#) that will tell you the critical difference required for your community to represent a significant shift in child development between any data collection period. The Comparative Results Tool is designed to provide communities with some guidance when interpreting your local results.

In the AEDC Community Profiles, [look up tables](#) are provided that report the critical difference for communities of different sizes.

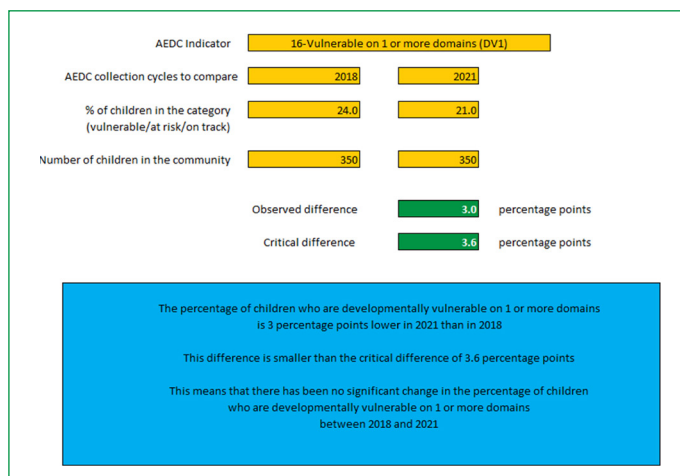
The percentage of children who are developmentally vulnerable in my community is lower in 2021 than 2018, but the change is less than the critical difference. Is this change still important?

Any change in the percentage of children developmentally vulnerable is important, even if it is less than the critical difference.

For example, in a community of 350 children, a reduction in the percentage of children who were developmentally vulnerable on 1 or more domains from 24% to 21% (3 percentage point drop), means that 10 fewer children are vulnerable. A change of this size does not meet the critical difference (see example extract from the Comparative Results Tool below), but it does mean that more children are coming to school ready to learn and succeed. If this pattern continues then we might see that the shift from 2018 to 2024 does reach the critical difference.

It is important for your community to celebrate the positive changes, rather than focusing exclusively on whether your community results reach the critical difference.

If your community finds the percentage of vulnerable children has increased, it is important to examine the reason for this change at the local level and to consider the factors which could be influencing these results.



What factors could lead to changes in AEDC results over time?

There are many factors that could lead to a change in the percentage of children who are 'vulnerable', 'at risk' and 'on track' in the AEDC domains over time. The list below provides some possible examples:

Coverage of AEDC Data Collection

- Were most children in the community included in the AEDC data collections?
- Were some groups of children not included, for example, due to a school participating in the 2018 AEDC but not the 2021 AEDC collection?

Access to Early Childhood Services and Programs

- Has it become easier or more difficult for families to access childcare centres, kindergartens, playgroups and/or child health services between 2009 and 2021? If so, do you think this would have led to improvements or declines in child development in your community?

Demographic or Socio-economic Changes in the Community

- Were any new housing developments or schools built recently that might have changed the characteristics of the young families who live in your community?
- Has there been noticeable socioeconomic growth or downturn in your community?
- Did any large businesses close in the past 5 years, causing families to migrate from your community?

Natural Disasters

- Some areas of Australia have experienced floods, fires or storms in the past few years, which are known to impact negatively on families and children.
- Have you experienced any natural disasters in your community that could have influenced the cohort of children who started full-time school in 2021, but perhaps not impacted earlier cohorts of children?

COVID-19

- COVID-19 has affected our day-to-day life, caused increased stress in some families, and affected the early childhood education of many children who started school in 2021.
- Did COVID-19 affect pre-school attendance for the 2021 cohort in your community? If so, were some groups of children impacted more than others?
- In 2021, were some children participating in online learning from home? If so, do you think families in your community would have been well placed to support their children's online learning, including having access to computers and internet?

When interpreting your local AEDC results, it is important to understand any demographic, socioeconomic or environmental changes in your community. The AEDC data is one of many indicators available to Australia communities, therefore, it can be useful to examine complimentary data sources for the community. The [Australian Bureau of Statistics](#) data or the [Social Health Atlas](#) can provide a background or context within which to consider the AEDC data.



The Australian Government is working with State and Territory Governments to implement the Australian Early Development Census (AEDC). Since 2002, the Australian Government has worked in partnership with eminent child health research institutes: the Centre for Community Child Health; Royal Children's Hospital, Melbourne; and the Telethon Kids Institute, Perth, to deliver the AEDC to communities nationwide.