Australian Early Development Census
An Australian Government Initiative

Our Children
Our Communities
Our Future

ISSUE 3

AEDC DATA STORY

How has the COVID-19 pandemic affected children?

What we know

The COVID-19 pandemic has had many effects on children and families. Globally, the physical health effects of COVID-19 infection have been milder for children than adults.[1] In Australia, hospital admissions of children with COVID-19 have been uncommon and serious illness associated with COVID-19 has been very rare.[2]

Although the immediate health effects of COVID-19 on Australian children have been minimal, the pandemic has had profoundly disruptive indirect effects on children's lives. Social distancing, stay-at-home orders (lockdowns) and border closures have disrupted children's routines, education and social activities.

Key points

- Data from the 2021 AEDC shows that children experienced higher levels of developmental vulnerability on some domains compared to previous years.
- Children living in the most socio-economically disadvantaged communities experienced the greatest increases in developmental vulnerability.
- Increases in developmental vulnerability may be related to the social and economic impacts of the COVID-19 pandemic.
- Regardless of the cause, the increases in developmental vulnerability require further investigation and effective responses to avoid life-long adverse impacts.

In 2020, Australia experienced the global COVID-19 pandemic. Over the next two years governments responded by implementing a range of public health measures to protect communities. This AEDC Data Story explores the potential impact of the COVID-19 pandemic on Australian children's health and development.

In Australia, lockdowns to reduce the transmission of the virus varied in their nature and intensity depending upon the state/territory where people lived. In some states and territories, non-essential businesses were forced to close and 'stay at home' restrictions were enforced. Some lockdowns were short and targeted whereas others were broad and extended. Figure 1 provides a timeline of COVID-19 lockdowns in Australia.

The effect of the pandemic on children and families

Parents and families – and the services that support them – have been affected by the pandemic, which has had flow-on effects for children.[3] Most of the data exploring the effects of the pandemic focuses on older children (6-12 years) and adults.[4] Less is known about the effects on young children (0-5 years). Some of the impacts reported among this age group include stress, anxiety, emotional difficulties and problem behaviours.[5, 6, 7, 8] The potential indirect effects on children, families and services are outlined in Figure 2.

The adverse impacts of the pandemic upon parents, such as stress, anxiety and depression,[9, 10, 11, 12] are especially concerning considering the importance of positive parent-child attachments during the early years.[4] Concerns have also been raised about the impact of early childhood education and care (ECEC) and school closures during lockdowns on children's learning and development.[1, 13, 14, 15, 16]

Across Australia, governments implemented a range of public health measures in response to the pandemic. Victorian residents experienced stricter lockdowns than other states and territories.[11, 17] Some studies suggest that these different public health measures have led to different outcomes for children. For example, two studies undertaken in Australia found that the mental health of children who experienced two lockdowns – which involved ECEC and school closures, as well as other wide-ranging closures – was worse than the mental health of children who experienced a single lockdown.[11, 18]

Overall, children (0-18 years) experiencing adversity appear to have been more profoundly affected by the pandemic than their peers.[10, 13] In Australia, for example, children whose parents had a pre-existing health condition experienced higher rates of anxiety and depression during the pandemic, as did children who had autism spectrum disorder (ASD).[10] Families who were experiencing financial difficulties before the pandemic experienced worse parent and family outcomes during the pandemic, which had flow-on effects for children in those households.[10, 19]

Although the indirect impacts of the COVID-19 pandemic were mostly detrimental to children and families, some families had positive experiences including having more quality time together as a family, more meaningful conversations with children and increased connection with family members.[18, 20]

Government financial support, including increased welfare payments, provided support for low-income earners during the pandemic that helped to reduce financial stress and alleviate poverty for families.

REFLECTION

How have children and families in your region been affected by the pandemic?

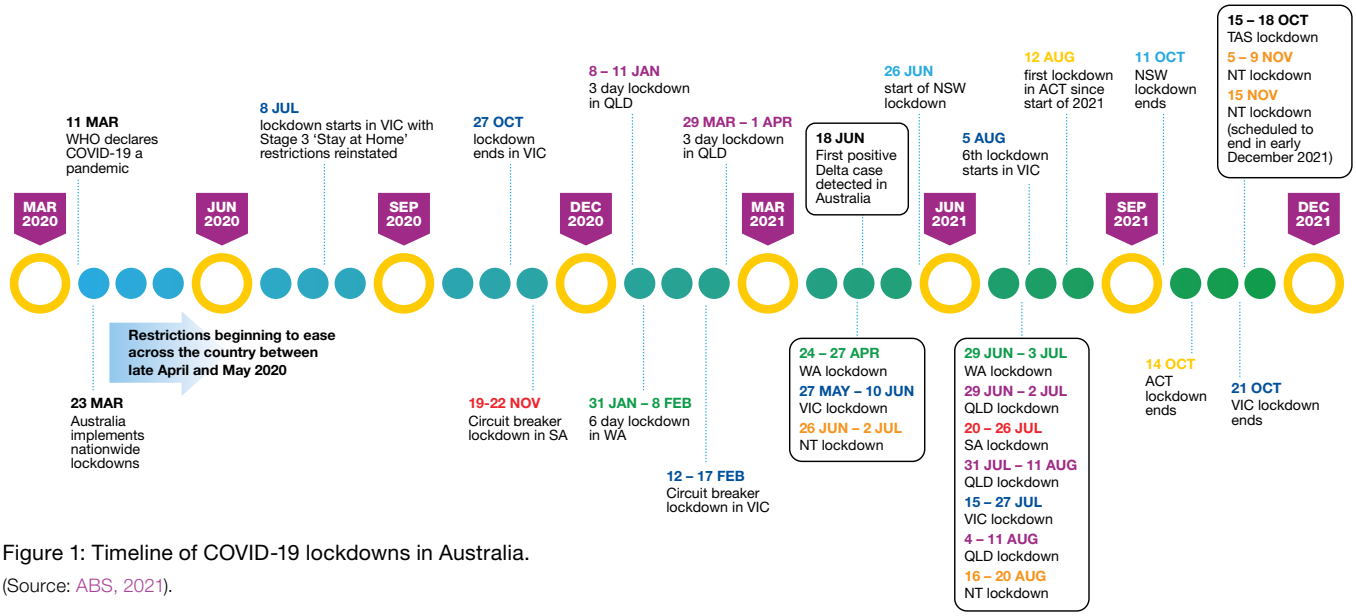

Figure 1: Timeline of COVID-19 lockdowns in Australia.
(Source: ABS, 2021).

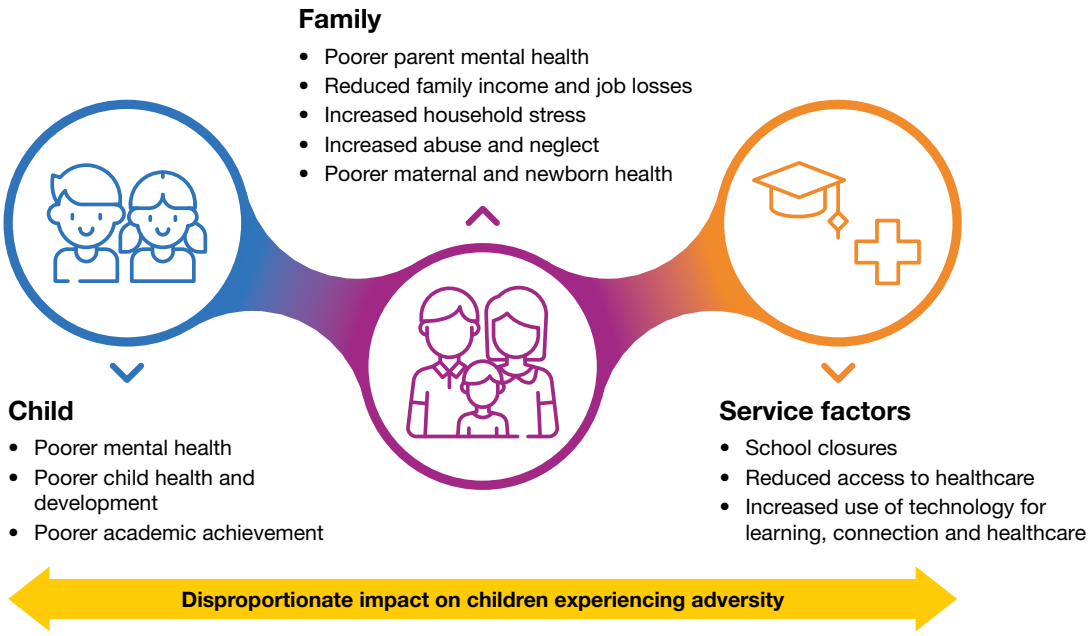

Figure 2: Potential indirect effects of the COVID-19 pandemic on children. (Source: Goldfeld, O'Connor, Sung, Roberts, Wake, West & Hiscock. 2022).

What have we learned?

Data from the 2021 Australian Early Development Census (AEDC) – including developmental vulnerability, parent education, community disadvantage and educational engagement – provides an insight into the potential impacts of the global COVID-19 pandemic on Australian children's health and development.

A child is considered developmentally vulnerable when they demonstrate a much lower ability in a competency compared to other children. Children in the bottom 10 per cent of the national AEDC population are considered developmentally vulnerable.

Child development in Australia

In 2021, a higher proportion of Australian children were developmentally vulnerable on one or more domains when compared to 2018 (from 21.7 per cent in 2018 to 22 per cent in 2021). Prior to this, trends over time indicate that the proportion of children developmentally vulnerable on one or more domains had remained steady since 2012 (22 per cent in 2012 and 2015).

The data from 2021 also indicates that a higher proportion of Australian children were developmentally vulnerable on two or more domains when compared to 2018 (from 11 per cent in 2018 to 11.4 per cent in 2021). Prior to this, the proportion of children developmentally vulnerable on two or more domains had remained relatively steady since 2012 (10.8 per cent in 2012, 11.1 per cent in 2015), with slight increases and decreases between each data collection cycle.

The AEDC also measures the percentage of children who are developmentally on track on five domains. There has been a steady increase in the proportion of children developmentally on track on five domains from 2009 (50.7 per cent) to 2018 (55.4 per cent). In 2021, a lower proportion (54.8 per cent) of Australian children were developmentally on track on five domains when compared to 2018 (see Figure 3).

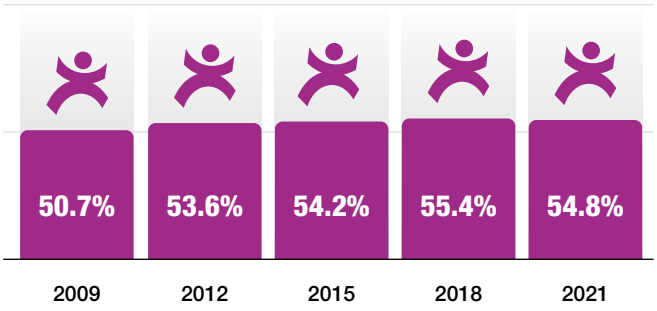

Figure 3: Percentage of children developmentally on track on five domains at a national level

There were increases in the percentage of children developmentally vulnerable between 2018-2021 on three domains. These are considered to be significant changes or 'critical differences[i]'. Increases in developmental vulnerability occurred in:

- physical health and wellbeing (from 9.6 per cent in 2018 to 9.8 per cent in 2021)
- communication skills and general knowledge (from 8.2 per cent in 2018 to 8.4 per cent in 2021)
- language and cognitive skills (school-based) (from 6.6 per cent in 2018 to 7.3 per cent in 2021).[20]

As shown in Figure 4, between 2018 and 2021 the domain of language and cognitive skills (school-based) had the largest increase compared to all the other domains (from 6.6 per cent to 7.3 per cent). This is notable considering that since 2012, the proportion of children who were developmentally vulnerable on this domain had remained relatively steady (6.8 per cent in 2012, 6.5 per cent in 2015 and 6.6 per cent in 2018). The only time there was a higher proportion of children developmentally vulnerable on this domain was in 2009.

Between 2018 and 2021, there was no change in developmental vulnerability on the emotional maturity domain and a significant decrease (critical difference) in vulnerability on the social competence domain (see Figure 4).

REFLECTION

What strategies could be used to address the increased proportion of children who are developmentally vulnerable on the domain of language and cognitive skills (school-based)?

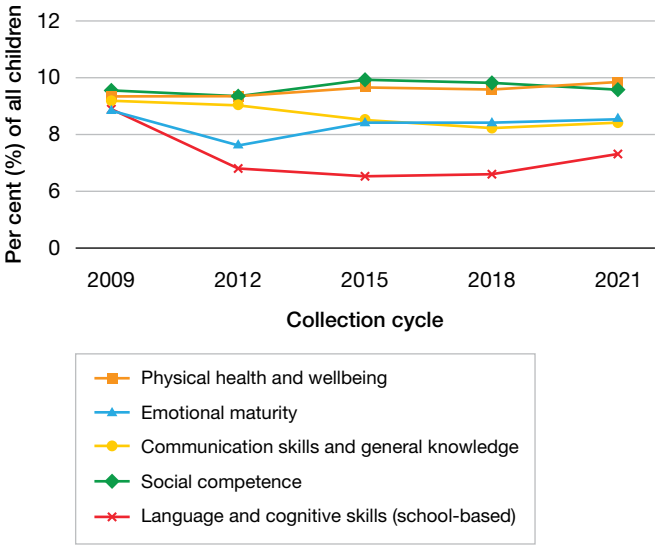

Figure 4: National trends on developmental vulnerability by domains 2009-2021

Developmental vulnerability in states and territories

Critical differences in developmental vulnerability between 2018 and 2021 by state/territory are indicated in Figure 5. Notably, increased vulnerability on the domain of language and cognitive skills (school-based) occurred in every state and territory, except the ACT. A comparison of the number of domains where critical differences are evident suggests that Victoria has not fared worse than other states and territories, despite more frequent and lengthy lockdowns.

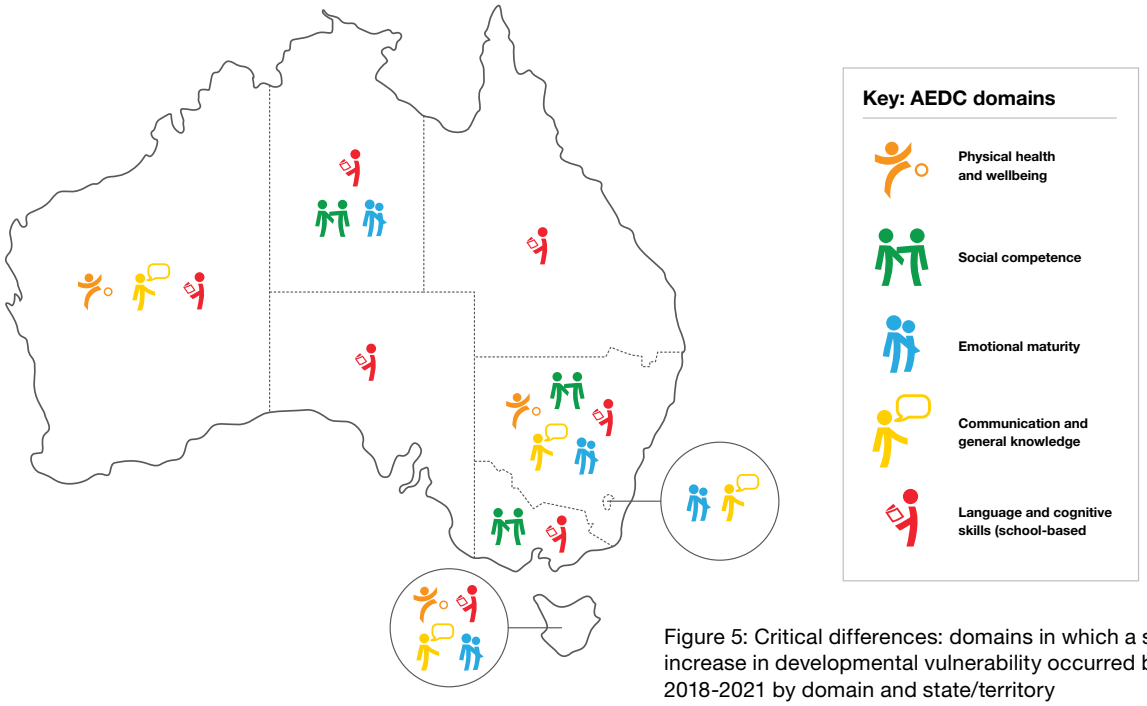

Figure 5: Critical differences: domains in which a significant increase in developmental vulnerability occurred between 2018-2021 by domain and state/territory

i 'Critical difference' is a term used by the AEDC to refer to "the minimum percentage point change required between two collection cycles for the results to represent a 'significant change' in children's development."

Developmental vulnerability and parent education

Between 2018 and 2021, the children of parents who did not have a postsecondary education experienced greater increases in developmental vulnerability than the children of parents who did have a postsecondary education.[ii]

For example, among children whose parents have a university degree[iii], developmental vulnerability on the domain of language and cognitive skills (school-based) increased by 0.5 per cent between 2018 and 2021 (from 2.6 per cent to 3.1 per cent).

By comparison among children of parents who did not have a postsecondary education, the proportion who were developmentally vulnerable on this domain increased by 2.5 per cent (from 15.7 per cent on 2018 to 18.2 per cent in 2021).

Differences in developmental vulnerability based upon parents' level of education – which are most likely a result of the social and economic conditions associated with education levels – are increasing over time. For example, in 2015, children whose parents did not have a postsecondary education were 5.8 times more vulnerable on the domain of language and cognitive skills (school-based) than children whose parents had a university degree. In 2018, they were 6 times more vulnerable on this domain, and 6.2 times in 2021. This increasing gap is evident in Figure 6.

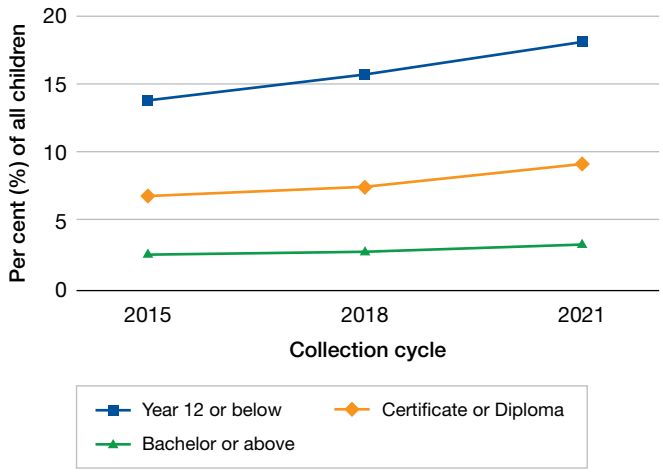

Figure 6: National trends in developmental vulnerability on the language and cognitive skills (school-based) domain by parents' level of education

Developmental vulnerability and community disadvantage

There is a clear pattern between community-level disadvantage and developmental vulnerability. For example, in the most socio-economically disadvantaged communities in 2021, 16.1 per cent of children were vulnerable on the domain of physical health and wellbeing compared to the least socioeconomically disadvantaged communities, where 6.3 per cent were vulnerable on this domain.[20]

Between 2018 and 2021, the differences in developmental vulnerability among children living in the most and least socio-economically disadvantaged communities increased in four of five domains. For example, in 2018, 12.7 per cent of children in the most disadvantaged communities were vulnerable on the domain of language and cognitive skills (school-based) and 2.8 per cent of children in the least disadvantaged communities were vulnerable on that domain – a difference of 9.9 per cent. In 2021, 14 per cent of children in the most disadvantaged communities were vulnerable on the domain of language and cognitive skills (school-based) and 3.2 per cent in the least disadvantaged communities were vulnerable on that domain – a difference of 10.8 per cent.

In previous years, the difference in developmental vulnerability on the domain of language and cognitive skills (school-based) between the most and least socioeconomically disadvantaged communities had been relatively steady. In 2009, the difference was 9.7 per cent, in 2012, the difference was 9.9 per cent and in 2015, the difference was 9.7 per cent.

REFLECTION

What action could support those children and families living in disadvantaged communities who have been disproportionately affected by the pandemic? How could the AEDC results help you to determine where to prioritise effort?

ii For the purposes of this analysis, a postsecondary education included a Certificate, Diploma, Bachelors' Degree or above. Parents without a postsecondary education may or may not have completed year 12.

iii For the purposes of this analysis, a university degree was defined as a Bachelors' degree or above.

Engagement in education

Participation in quality early childhood education and care supports early childhood development. Examining children's participation in education – such as their attendance at preschool and adaption to school – provides insights into how they are faring and potential issues in the future. When compared to 2018, in 2021 there were very slight decreases across Australia in the proportion of children:

- attending preschool (92.4 per cent in 2018 to 92.3 per cent in 2021)
- adapting well to school (76.3 per cent in 2018 to 75.4 per cent in 2021).

Parents' engagement in their children's early learning also influences educational outcomes. The mental or financial distress associated with the pandemic could have adversely affected parents engagement with their child's learning. [21] Between 2018 and 2021, there was a very slight decrease in the proportion of parents actively engaged with their children's school (as reported by teachers) from 74.8 per cent in 2018 to 74.7 per cent in 2021.

Since 2009 there has also been a gradual downward trend in the percentage of children being regularly read to at home (as reported by teachers) from 76.9 per cent in 2009 to 73.5 per cent in 2021.

All states and territories except Queensland experienced a decrease in the percentage of children reported to be adapting well to school, and four (ACT, NSW, SA and VIC) experienced a decrease in the percentage of parents actively engaged with their children's school.

Between 2018 and 2021, the differences between children whose parents did and did not have a postsecondary education increased for all outcomes relating to educational engagement including children's adaption to school, parents' engagement with school and children being read to in the home. Children whose parents did not have a postsecondary education experienced a similar drop in preschool attendance from 85.9 per cent in 2018 to 85.5 per cent in 2021 when compared to children whose parents had a university degree.

The differences between the most and least disadvantaged communities increased for multiple outcomes relating to educational engagement. The largest difference between the most and least disadvantaged communities in regard to educational engagement is for children being read to in the home: more than 80 per cent of children in the least disadvantaged communities are being read to in the home, compared to less than 60 per cent of children in the most disadvantaged communities (see Figure 7).

REFLECTION

What strategies are effectively supporting parent engagement in schools and preschools in your community? Do the AEDC results help you know what is working?

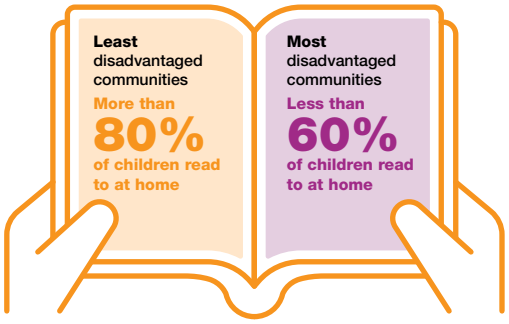

Figure 7: Percentage of children read to at home in the most and least disadvantaged communities

Implications

Overall, the 2021 AEDC results provide interesting insights into children's development as they began school during the COVID-19 pandemic. While it is not possible to say whether the pandemic contributed to some increases in developmental vulnerability, our analysis of the data highlights areas that require immediate responses as well as further investigation.

Practice and policy implications

- The increased proportion of children who are developmentally vulnerable on the domain of language and cognitive skills (school-based) suggests a need for policies and interventions aimed at enhancing these skills. The earlier this support is provided, the more effective and cost-efficient it will be.
- Targeted interventions and supports for young children (before they start school) and families with multiple vulnerabilities – especially those living in disadvantaged households or communities – may help to reduce increasing gaps in developmental vulnerability between children. This will require a 'stacked' approach of strategies that simultaneously address the needs of children, families and communities to reduce the 'vulnerability gap' that has been steadily increasing over time. [22]

- Parents play a critical role in supporting children's development, therefore policies and interventions that support all parents will benefit all children. Engaging with parents will be essential for these to be successful. The AEDC data provide the opportunity for a coordinated approach across states and territories that can both target and evaluate these efforts.
- The immediate mental and financial impact of the pandemic on families with young children has been substantial. Policies and interventions directly targeting these families will have positive flow-on benefits for their children.

Research

- New evidence regarding the impacts of the pandemic upon children is emerging every day. To minimise any adverse effects on children, and to understand the potential benefits, we need to continue to build our understanding of how the COVID-19 pandemic is affecting children's health and development across Australia.
- Although AEDC data cannot be used to demonstrate causality, future research could use longitudinal cohorts established prior to the pandemic – for example, the Multi-Agency Data Integration Project (MADIP) [23] – to explore these issues.
- Some research has indicated the pandemic has resulted in increased emotional difficulties and problem behaviours among children, yet AEDC data at the national level indicates that there has been no change in young children's emotional maturity between 2018 and 2021, and a slight reduction in developmental vulnerability on the social competence domain. Further research that examines this apparent discrepancy could provide insights into how the pandemic affected children's social and emotional wellbeing and what factors protected which children from potential negative effects.
- Evaluating different ways to improve children's language and cognitive skills (school-based) during the early years of school could provide useful insights into reducing developmental vulnerability on this domain. Interventions need to be able to be tested and implemented rapidly for maximum impact. Given the existing inequities in NAPLAN results, this could have a positive impact on educational outcomes.
- The challenges that some families face when accessing services were exacerbated during the pandemic. At the same time digital solutions such as telehealth enabled some families, such as those in rural areas, to access services with greater ease. Testing and scaling effective service access approaches would benefit families into the future.

Children born during the pandemic are yet to begin school. Given the importance of a child's first 1000 days for providing foundation for health, development and wellbeing, the 2024 AEDC data collection may reveal more about the impact of the pandemic on children in the early years.

For further information

About AEDC Data Stories

What can the AEDC tell us about children's health and development, and how can we use this information to improve their wellbeing? The AEDC Data Story series explores the 2021 AEDC data to reveal how children are faring at school entry and where efforts could be focused to help ensure all children thrive. Each Data Story considers trends and how AEDC data can inform priorities, policies and practice to improve outcomes for children. *Publication disclaimer - This report uses data from the Australian Early Development Census (AEDC). The AEDC is funded by the Australian Government Department of Education. The findings and views reported here are those of the authors and should not be attributed to the Department or the Australian Government.*

The AEDC

In 2021, the fifth Australian Early Development Census (AEDC) was undertaken with 305,015 children in their first year of full-time school. The Australian Early Development Census (AEDC) is a nationwide measure of early childhood development that shines a light on what is working well and where we have more work to do to ensure all children are afforded the benefits of a strong start in life. For further information consult the AEDC website: www.aedc.gov.au

The Centre for Community Child Health

The Centre for Community Child Health is a department of The Royal Children's Hospital Melbourne, and a research group of the Murdoch Children's Research Institute. We strive to improve the lives of children and families. www.rch.org.au/ccch

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Resources on COVID-19 and children

- Impact of the COVID-19 pandemic on children
- COVID-19 Resources
- COVID-19 and Kids Resource Hub

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