



# Aftershock

Addressing the Economic and Social Costs  
of the Pandemic and Natural Disasters

Report Four –  
Children's Wellbeing & Development

IMPACT  
ECONOMICS  
AND POLICY



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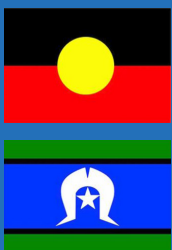
IMPACT ECONOMICS AND POLICY / OCTOBER 2022

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### Acknowledgement of Country

We acknowledge Aboriginal and Torres Strait Islander peoples as the Traditional Owners of Country Throughout Australia and their continuing connection to both their lands and seas. We also pay our respects to Elders – past and present – and generations of Aboriginal and Torres Strait Islander peoples now and into the future.

We accept the invitation of the Uluru Statement of the Heart and support the campaign to for a First Nations Voice to Parliament to be protected by the Australian Constitution.



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# Childhood Wellbeing and Development

The people of NSW have faced unprecedented upheaval and disruption over the past two and half years, as the state has been hit by fires, floods and a pandemic. And children have faced some of the greatest upheavals, with increasing rates of financial stress amongst families, and the closure of schools and childcare having a profound impact on their safety, social development and educational outcomes.



In this series of reports, *Aftershock: addressing the economic and social costs of the pandemic and natural disasters*, we look at how the pandemic and natural disasters have impacted the people of NSW across a number of key domains of wellbeing. In this, the final of the series, we look at the impact on children's development and wellbeing.

Analysis undertaken for this report highlights that the last two and half years have impacted significantly on children in NSW:

- ▶ A 13.4 per cent increase in the number of children from low socio-economic areas developmentally vulnerable at the start of school
- ▶ A 36.6 per cent increase in the number of contacts to the Kids Helpline, including increases in the number of children seeking counselling for abuse and suicide prevention
- ▶ An increase, during 2020-21, of 32.7 per cent in the number of children presenting at emergency departments with mental health concerns, five times the previous annual growth rate

- ▶ Almost 220,000 students attending low SES schools who, on average, missed 15 weeks of face-to-face learning during the pandemic, potentially equating to up to \$16.3 billion in lost lifetime earnings; and
- ▶ An increase of 13,401 children at risk of significant harm between 2018-19 and 2020-21, which risks an increase in the lifetime costs associated with child abuse and neglect in NSW of \$7.8 billion.

This report does not separately quantify the impact on Aboriginal and Torres Strait Islander children. However, given the higher risks, stemming from the ongoing impacts of colonisation on starting school developmentally behind, poor mental health, poor educational outcomes and being at risk of significant harm we expect these impacts will disproportionately impact Aboriginal and Torres Strait Islander Children.

Because of the variation in the length and nature of lockdowns and the number of children attending low SES schools, some parts of NSW face larger lifetime educational losses (see Table 1).



**Table 1** Potential reduction in lifetime earnings across NSW due to losses in educational outcomes amongst children attending low SES schools – top 20 impacted LGAs

LOCAL GOVERNMENT AREA	LIFETIME EARNING LOSSES (\$ MILLION)
Fairfield, City of	1,222
Blacktown City Council	1,062
Canterbury-Bankstown, City of	866
Central Coast Council	829
Campbelltown, City of	796
Liverpool, City of	755
Penrith, City of	741
Cumberland City Council	584
Lake Macquarie, City of	567
Maitland, City of	461
Cessnock, City of	458
Mid-Coast Council	421
Wollongong, City of	415
Dubbo Regional Council	358
Tamworth Regional Council	322
Shoalhaven, City of	268
Newcastle, City of	258
Port Stephens Council	242
Clarence Valley Council	202
Hawkesbury, City of	202

**Source:** Impact Economics and Policy modelling (see Appendix for methodology)

Addressing these impacts and reducing the lifetime costs should be a priority for Government, including funding of high quality school tutoring programs; integrating provision of whole-of-family, early intervention health and social services into the school environment in at-risk communities; and the expansion of early intervention and child protection services, including growing the provision of culturally-appropriate support and service provision, led by Aboriginal Community Controlled Organisations and multicultural services.

Without intervention our children stand to pay the highest price for the upheaval caused by the natural disasters and pandemic.



## NSW Timeline

### 2019-2020 BUSHFIRES

**6.2 per cent** of the state burnt by more than 11,400 bush and grass fires, 26 lives were lost and 2,448 homes destroyed.

### MARCH 2020 - MAY 2020

**COVID-19** restrictions were introduced across the state, limiting public gathering, operation of businesses and schools.

### MARCH 2021 FLOODS

A total of **52 evacuation warnings** and orders were issued, **impacting over 80,000 people**. The Northern Rivers, Mid North Coast, Hunter-Central Coast and Hawkesbury-Nepean Valley were all severely impacted. A number of educational facilities were closed because of the floods including 376 schools, 244 early childhood centres and 10 TAFE facilities.

### JULY 2021 - NOV 2021

**COVID-19 restrictions were re-introduced across the state** limiting public gathering, operation of businesses and schools. Parts of Sydney were placed under extreme lockdown conditions, with additional restrictions placed on residents' ability to work and move around their communities.

### 2022 FLOODS

**In March and July 2022 large areas of NSW were impacted by major flooding events**, with Northern Rivers once again flooded and large parts of Western Sydney also affected. In the city of Lismore over 3,000 homes were damaged. In July 2022 residents of Camden in Western Sydney were ordered to evacuate for the fourth time that year due to major flooding.

### 2022 - LIVING WITH COVID-19

**Almost 4,000 lives have been lost to the pandemic** with over 3 million cases of the disease since February 2020. As new variants emerge the State remains under high alert, and the health system is struggling to cope.





PHOTO COURTESY: NEWTOWN NEIGHBOURHOOD CENTRE



# Introduction

Childhood experiences have a profound impact on lifetime health, wellbeing and economic participation. Adverse Childhood Experiences, including poverty, physical and emotional abuse, developing a mental health condition, less years of formal education and being exposed to household violence all contribute to a higher probability of poor physical and mental health in adulthood, lower employment prospects and lower lifetime earnings.

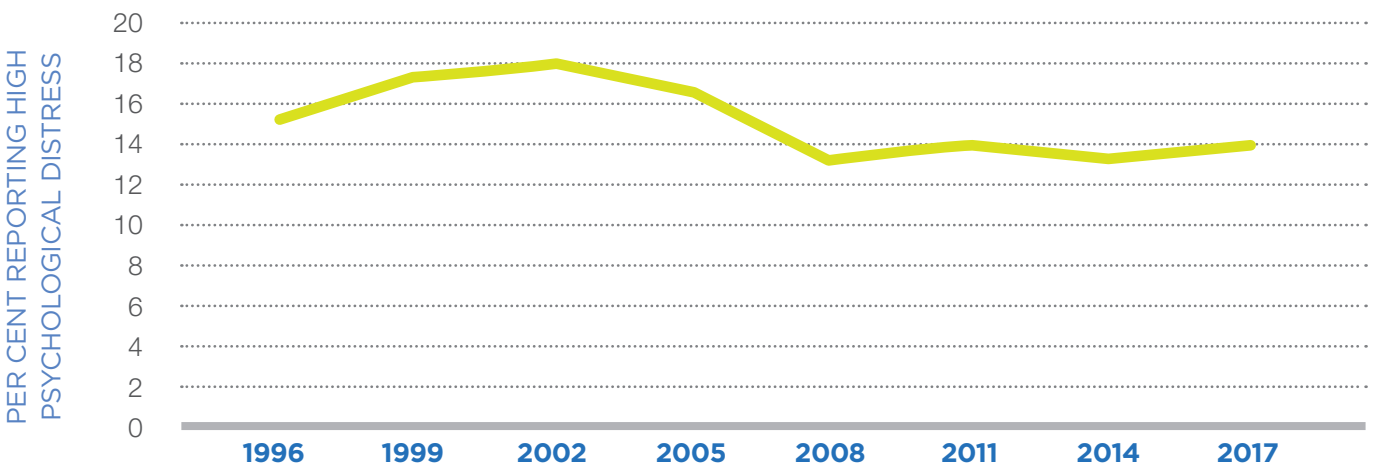
One in six Australian children are living in poverty,<sup>1</sup> while in NSW one in three children from low-socioeconomic backgrounds are starting school developmentally behind.<sup>2</sup>

Children who grow up in persistent poverty are three times more likely to not finish high school compared to children who have never been poor.<sup>3</sup> This then flows through to lifelong employment prospects and earnings. Analysis by the Mitchell Institute has costed the lifetime economic costs of each cohort of children in Australia not completing high school at \$23.2 billion.<sup>4</sup>

A 2019 report by Deloitte for the NSW Advocate for Children and Young people estimated the lifetime costs of violence against NSW children in 2016-17 was \$20.6 billion.<sup>5</sup>

Rates of poor mental health amongst children and young people were relatively consistent in the period before the pandemic, with between 13 and 18 per cent of secondary school students reporting high psychological distress. However, this group was particularly vulnerable to the impacts of the pandemic and natural disasters that have occurred in NSW since the end of 2019. Without further supports and services to ameliorate these impacts, the long-term consequences on educational attainment, mental and physical health and earnings are likely to be significant.

**Figure 1 Rates of High Psychological Distress Amongst NSW Secondary School Students**



Source: NSW Health Stats - [www.healthstats.nsw.gov.au/#/indicator?name=-men-hidistress-stud&location=NSW&view=Trend&measure=prevalence&groups=Sex&compare=Sex&filter=Sex,Persons,Females,Males](http://www.healthstats.nsw.gov.au/#/indicator?name=-men-hidistress-stud&location=NSW&view=Trend&measure=prevalence&groups=Sex&compare=Sex&filter=Sex,Persons,Females,Males)

## Aboriginal and Torres Strait Islander Children

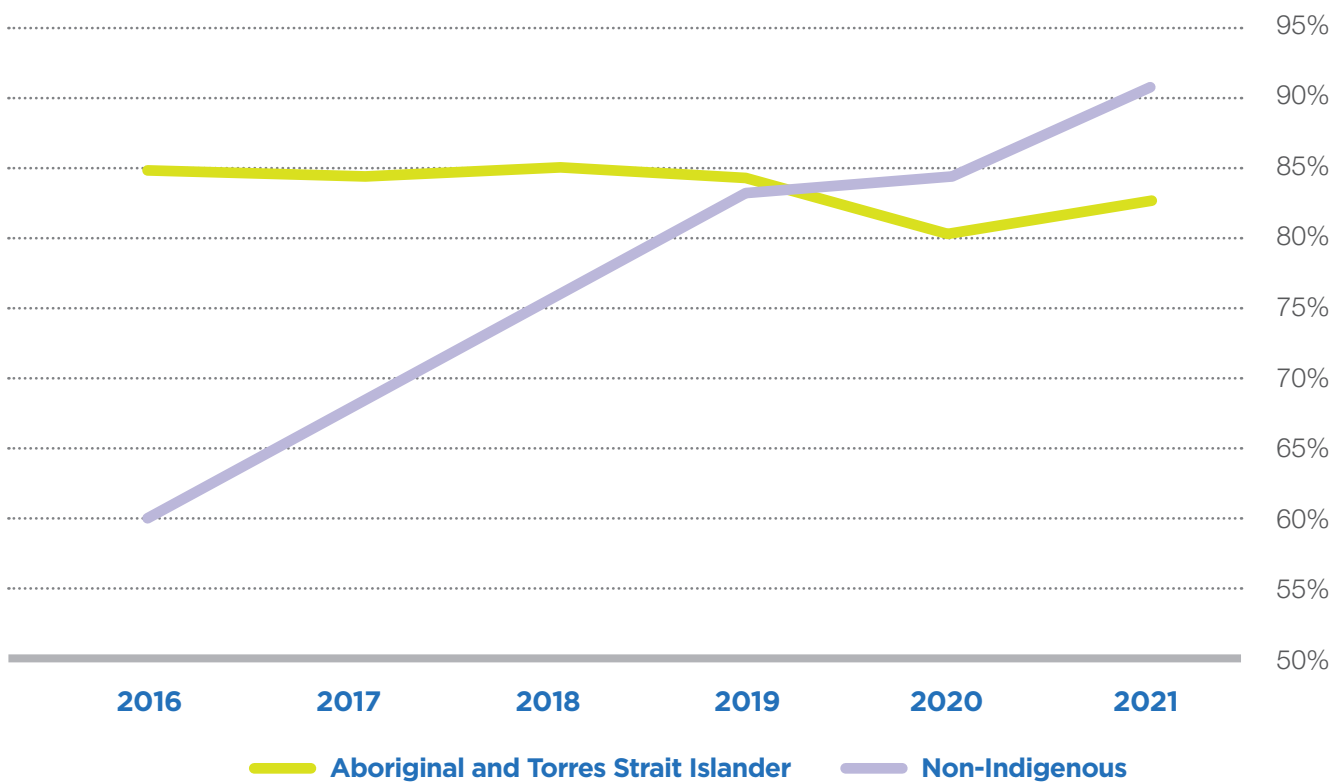
Aboriginal and Torres Strait Islander children experience higher rates of psychological distress and are more likely to be reported at risk of significant harm in NSW, driven by longstanding poverty, marginalisation, racism, high psychosocial stress and a lack of specific services that respond to needs of Indigenous families and children.

The dark history of the stolen generation and intergenerational trauma that the removal of children caused Aboriginal communities underlies the need

for Aboriginal community-led services to support children and families. The recent rise in the number of Aboriginal children the subject of Risk of Significant Harm (ROSH) reports creates additional urgency for increased funding of the sector. Between 2015-16 and 2019-20 there was a 40 per cent increase in these reports.<sup>6</sup>

There are positive indications of improvements, with the proportion of Aboriginal children in NSW enrolled in pre-school the year before formal schooling increasing from 60.1 per cent in 2016 to 84.4 per cent in 2020, and now higher than non-Indigenous children (80.4 per cent).

**Figure 2 Pre-School Attendance Rates in NSW in year before formal schooling**



**Source:** Productivity Commission (2022), Children in the state-specific YBFS age cohort who are enrolled in a preschool program - NSW: [www.pc.gov.au/closing-the-gap-data/dashboard/socioeconomic/outcome-area3](http://www.pc.gov.au/closing-the-gap-data/dashboard/socioeconomic/outcome-area3)

However, Aboriginal children in NSW are more likely to start school developmentally vulnerable. Latest data from the Australian Early Development Census shows that in 2021 over 2 in 5 Aboriginal and Torres Strait Islander children compared to 1 in 5 non-Indigenous children started their schooling journey developmentally vulnerable.<sup>7</sup>



# FAMILY IS CULTURE

**The Family is Culture review** - commissioned by the NSW Minister for Family and Community Services in 2016 and undertaken by Professor Megan Davis – was the largest, most comprehensive independent, Aboriginal-led review of Aboriginal children in the NSW child protection system to date.

The final report, released in late 2019, described a system lacking in accountability that maintains resonance with historical practices of child removal used against Aboriginal communities, along with numerous other concerning trends.

**The Family Is Culture review made 126 systemic recommendations to the NSW Government to improve outcomes for Aboriginal children and families in the state.**

Almost three years on, concerns remain that progress has been piecemeal, lacking in substance and that the NSW Government has failed to adequately engage or empower Aboriginal communities and stakeholders in the implementation of Family is Culture recommendations.

**As the relevant peak bodies, AbSec and the Aboriginal Legal Service have identified and we support in this report's recommendations, there are five priorities from the review requiring urgent action:**

- ▶ Strengthening system accountability and oversight – including establishing an independent NSW Child Protection Commission as a 'one-stop shop' for independent oversight and monitoring of the NSW child protection system, with at least one Aboriginal Commissioner and an Aboriginal Advisory Body appointed in consultation with the Aboriginal community;
- ▶ Expediting the suite of legislative reforms to strengthen safeguards for Aboriginal children and young people and their families;
- ▶ Significantly greater investment in early support and keeping families together – at least equal to the proportion of Aboriginal children in the child protection system and directed through an Aboriginal commissioning framework;
- ▶ Embedding the Aboriginal Case Management Policy and Practice Guidance – including the establishment of Aboriginal Community Controlled Mechanisms, Community Facilitators and Aboriginal Family Led Decision-Making;
- ▶ Embedding Indigenous data sovereignty – establishing the systems, structures, and processes to enable communities to collect, own and use their data.



## Children with a Disability

Approximately 380,000 school-aged children across Australia, or one in ten students, have a disability and have the same levels of school attendance as children without a disability. However, people with a disability are less likely to complete post-school qualifications.

Children with a disability are also twice as likely to be survivors of violence, with 1 in 5 experiencing abuse before the age of 15, compared to 1 in 10 without a disability.<sup>8</sup>



PHOTO COURTESY: THE PLACE,  
CHARLESTOWN COMMUNITY CENTRE



# Natural Disasters and Child Development & Wellbeing

Natural disasters pose direct risks to childhood development and wellbeing, including their impact on physical health, mental health and learning.<sup>9</sup>

Disasters also have greater indirect risks for children when parents and other adults are impacted, as they can erode children's care, protection and support systems.<sup>10</sup>

## Physical Health

Compared to adults, children experience more severe physical effects from natural disasters as they breathe more air per kilogram of their weight, are at greater risk from fluid loss and are more likely to lose body heat.<sup>11</sup>

Research on Hurricane Katrina found that children exposed to the disaster were at heightened risk of headaches, nausea, and lethargy.<sup>12</sup>

## Mental Health

Following a natural disaster, up to 50% of children report post-traumatic stress symptoms, including recurring thoughts about the disaster, hypervigilance, or difficulty sleeping or concentrating.<sup>13</sup> Children who have experienced natural disasters have also been found to experience symptoms of depression, such as feeling sad or losing interest in activities, and symptoms of anxiety, such as fears and worries about safety.<sup>14</sup> Chronic mental health symptoms have been observed among children even four years after a disaster event.<sup>15</sup>

## Impact on Learning

Children's learning can be disrupted by natural disasters such as earthquakes, floods and fires due to school closures and interruptions in children's attendance.

In the aftermath of Hurricane Katrina, children experienced school disruption and high rates of absenteeism. An estimated 196,000 public school students in Louisiana had to change schools, and approximately 50,000 students did not attend school during the remainder of the academic year.

A report from the Grattan Institute highlighted that students lose learning when not at school over the school term breaks.<sup>16</sup> For example, studies show that over the US summer break, young children are estimated to lose up to three months of learning from the previous school year.<sup>17</sup> And studies in France and Argentina show teacher strikes result in students achieving less and fewer students completing school.<sup>18</sup>

Longer term exposure to natural disasters can alter brain anatomy and functioning, inhibiting learning and memory processes. For example, children exposed to disasters report trouble concentrating (a common symptom of post-traumatic stress), which can interfere with learning at school.<sup>19</sup> A study examining North Carolina schools impacted by the 1999 - 2000 storms found that student achievement scores were lowered by 5 - 15 per cent across schools.



## Impact on Babies and Infants

Natural disasters can negatively impact babies and toddlers, who can be susceptible when families experience a heightened amount of physical, mental and financial stress. The first few months and years of a child's life are vital for their long-term development, health and well-being. There is strong pre-existing evidence that babies and children living in families with stress may have slower development growth, including difficulty in emotional regulation and social or behavioural issues.

There can be negative impacts from reduced support systems for babies and their families during a natural disaster. For example, healthcare workers or social workers who would normally visit homes to provide important health and development advice may be stretched, and family access to specialist services or mental health supports may be more limited. Less social support from family and friends, and less opportunities to interact socially with other small children at childcare and day care, can also have negative impacts. In addition, pregnant individuals who experience increased anxiety and stress due to a negative external event may experience slower baby development, leading to lower birth weights and long term impacts on health and development.



PHOTO COURTESY:  
THE PLACE, CHARLESTOWN  
COMMUNITY CENTRE



# Economic Costs of Poor Child Development and Wellbeing

Childhood is a critical time, with experiences and outcomes having lifelong consequences on an individual's health, wellbeing and economic security.

## Mental Health and Wellbeing

Experiencing poor mental health and wellbeing during childhood is associated with lower lifetime earnings and asset accumulation. Around 50 per cent of children who are diagnosed with a mental health condition continue to experience issues with their mental health into adulthood.<sup>20</sup>

One United States study using longitudinal data that could control for individual and family effects, found poor mental health in childhood reduces family income by around \$300,000 over the life course.<sup>21</sup> These losses accrue due to interrupted education and the link to later episodes of poor mental health.

Australian research has shown that children with a mental health condition by Year 3 are six to nine months behind their peers, and that this gap grows to between 1.5 and 2.8 years by Year 9.<sup>22</sup>

Another major study, the Childhood to Adolescence Transition Study (CATS) undertaken by the Murdoch Children's Research Institute in Melbourne, has further disentangled the impacts of mental health from other factors by tracking students as they move through school. It found that

students lose about eight months' worth of learning from Year 3 to Year 7 if they have low wellbeing, and nearly ten months of learning if they are bullied for two or three years.<sup>23</sup>

## Impacts of Lost Schooling

Australian estimates indicate that for every year of lost schooling lifetime earnings are reduced by 10 per cent,<sup>24</sup> highlighting the critical role of each additional year of schooling in lifting productivity across the economy. These are similar estimates to those found in the UK, Canada, Netherlands, Norway and the United States.

Non-school completion and disengagement are associated with lifetime fiscal and social costs of \$1.1 million per person, for those who remain disengaged. Australia-wide lifetime costs of \$50.5 billion are estimated for the 45,700 disengaged young people each year who leave school early.<sup>25</sup>

## Child Abuse and Neglect

Findings from the Australian Bureau of Statistics 2016 Personal Safety Survey indicate that the 13 per cent of Australian adults who experienced violence during childhood have poorer outcomes:

- ▶ People who experienced child abuse were twice as likely to experience violence as an adult
- ▶ People who experienced child abuse were three times as likely to experience partner violence
- ▶ Women who experienced child abuse were 75 per cent more likely to report having a physical disability as adults, and 300 per cent more likely to report having a psychological disability
- ▶ Men who experienced child abuse were 50 per cent more likely to report having a physical disability as adults, and 400 per cent more likely to report having a psychological disability
- ▶ Women who experienced child abuse were 14 per cent less likely to finish high school and men were 25 per cent less likely to finish high school than those who did not experience child abuse.

A 2019 report for the NSW Advocate for Children and Young People found that the lifetime costs of experiencing childhood abuse and neglect were \$734,000 per child, with a total lifetime cost of new child abuse and neglect cases each year of \$20.6 billion in NSW.<sup>26</sup> These costs include education, health, disability, lost productivity and increased justice system costs.



# Impact of the Pandemic on Child Development and Wellbeing

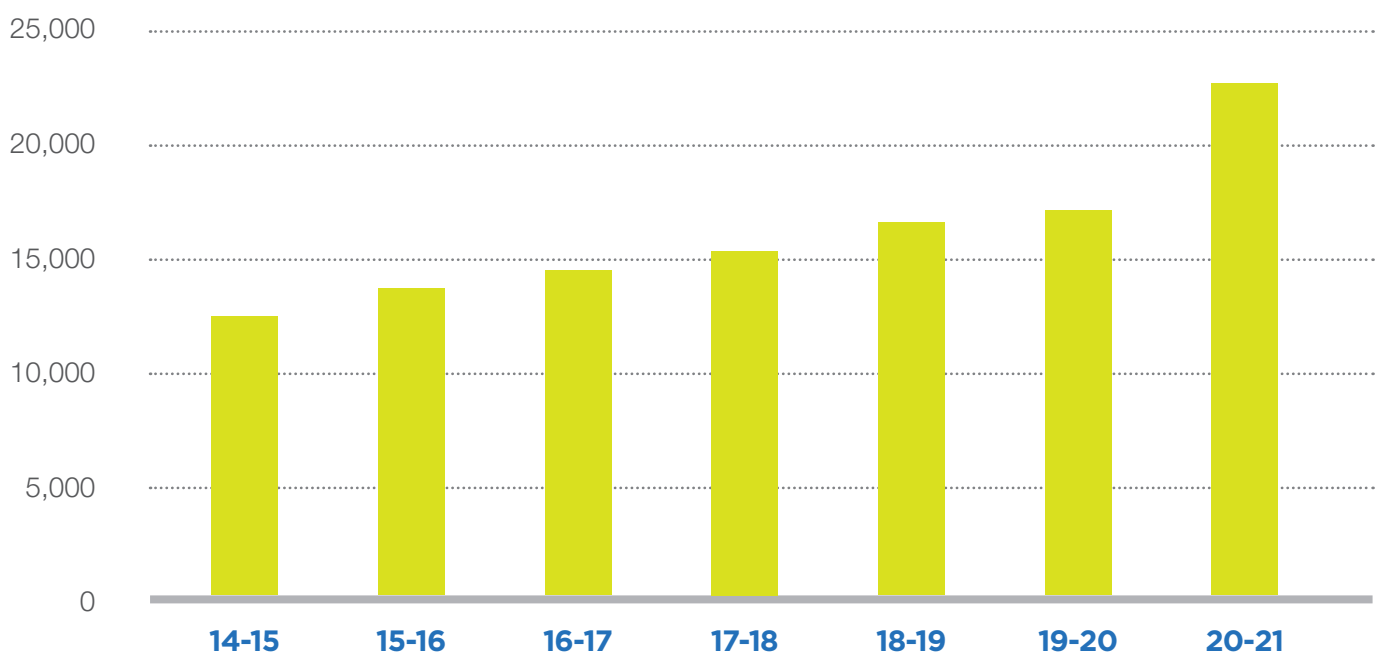
Children have been impacted by the pandemic and associated lockdowns in many direct and indirect ways. The closure of schools and limits on social interaction represent the most direct impacts, reducing educational outcomes and limiting healthy child development. At the same time, higher rates of unemployment, domestic and family violence, housing stress and poor parental mental health have contributed to increased risks of child neglect and harm.

Countering these impacts, the increase in support payments during 2021 will have significantly reduced household financial stress and is likely to have counteracted some of the negative impacts of the pandemic during the period.

## Mental Health and Wellbeing

There is significant and mounting evidence that the pandemic and associated lockdowns have had a large negative impact on child mental health and wellbeing in NSW. While the number of children presenting at emergency departments with mental health concerns has been increasing overtime, it jumped by 32.7 per cent in 2020-21. This compares to 6.6 per cent average annual growth in presentations since 2014-15.

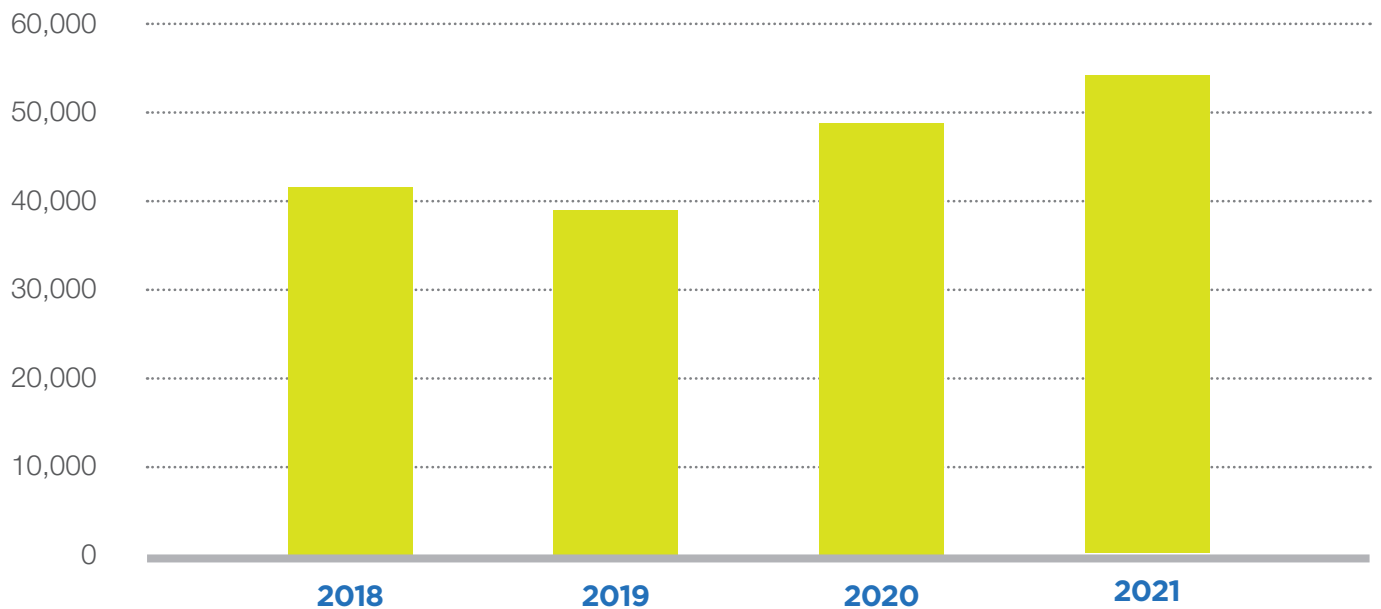
**Figure 3** Emergency Department Presentations for Mental Health, Under 17 years of Age NSW



Source: NSW Health Stats

In addition, the Kids Helpline in NSW reported a 36 per cent increase in calls between 2019 and 2021, with emergency calls alone increasing by 111 per cent between 2020 and 2021.<sup>27</sup>

**Figure 4 Number of Contacts to Kids Helpline in NSW**



**Source:** Kids Helpline (2019,2021,2022), Insights NSW: [www.yourtown.com.au/insights/annual-overviews](http://www.yourtown.com.au/insights/annual-overviews)

## Impact on Early Childhood Development

The Australian Early Development Census publishes detailed information on the number of children entering school developmentally on target and developmentally vulnerable on one of five domains: health; social; emotional; language and communication.

Between 2018 and 2021 in NSW the number of children starting school developmentally vulnerable in one or more domains increased by 5.8 per cent; and the number vulnerable in two or more domains increased by 9.3 per cent.<sup>28</sup>

The increase was higher amongst children from lower socio-economic areas. The number of children entering school developmentally vulnerable in one or more domains increased by 8.4 per cent; and the number vulnerable in two or more domains increased by 13.4 per cent. Because the Australian Early Development Census occurs at the start of the school year these figures only capture the impacts of the 2020 lockdowns on the early development of children.



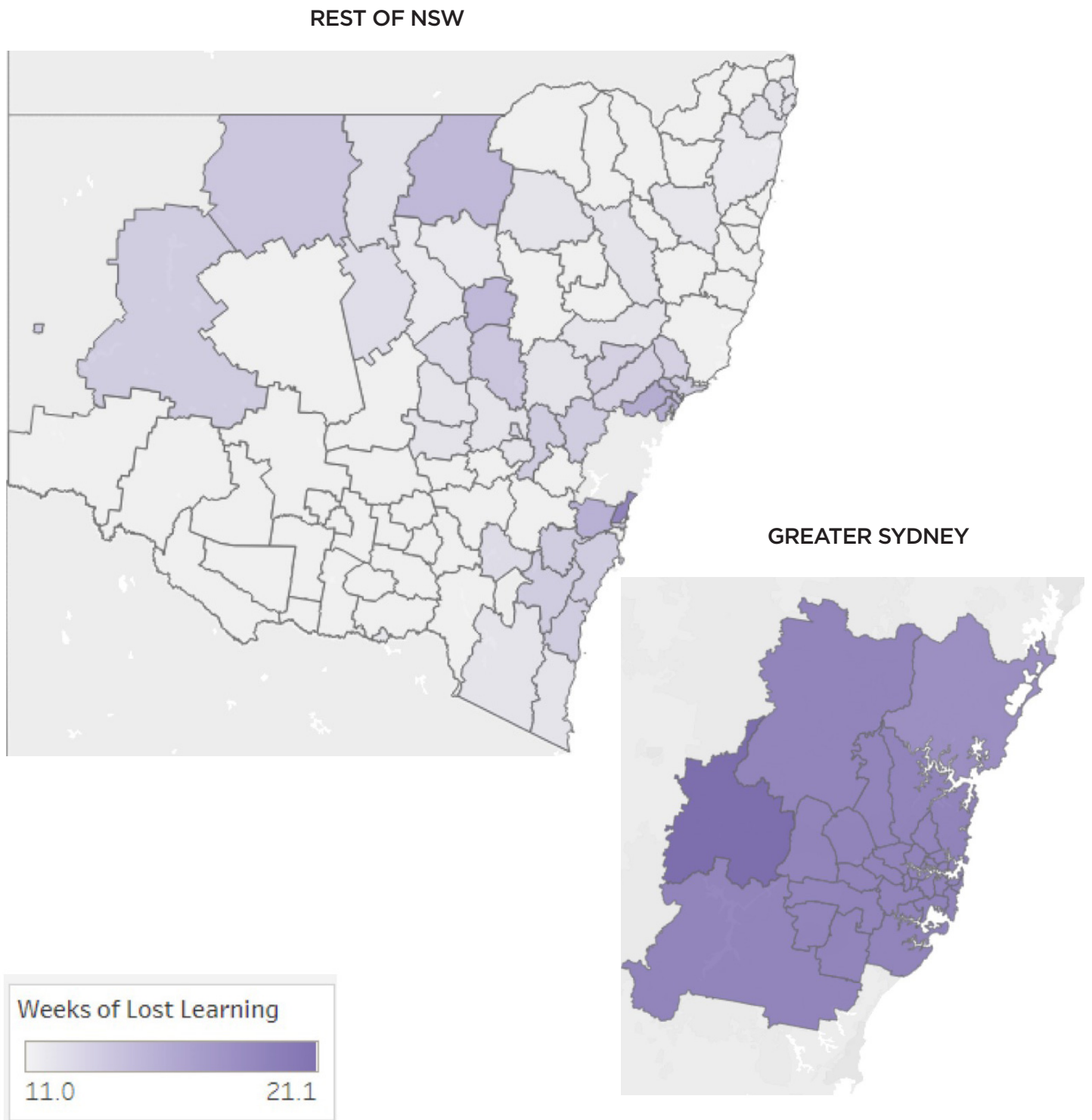




## Impact on Schooling

As a result of the lockdowns associated with the COVID-19 pandemic, school students in NSW missed out on between 7 and 19 weeks of face-to-face learning across 2020 and 2021. While schools moved to online teaching to ensure ongoing education during this period, many students were unable to engage and are likely to have suffered learning losses.

**Figure 5 Weeks of Lost Learning**





A number of international studies across countries have found the move to remote learning significantly reduced educational outcomes, with children from lower socioeconomic backgrounds the most impacted.<sup>29</sup> The World Bank has estimated that globally losses could top \$10 trillion in lifetime earnings.<sup>30</sup> However, Australian evidence is more mixed.

The 2021 Naplan Results showed minimal and statistically insignificant differences on results compared to 2019, even in Victoria which experienced the longest lockdowns and school closures through 2020.<sup>31</sup> This result is surprising and could be driven by a number of factors including the change from paper to online testing, the success of tutoring programs, and a greater focus on mathematics and literacy during the lockdown periods.

However, check-in assessments administered by the NSW Government have shown a decline or loss in

learning. The 2020 and 2021 assessments indicated losses across ages, with larger declines observed in secondary school after the 2021 shutdowns.<sup>32</sup>

A 2021 Study in NSW that looked at the losses from the 2020 shutdowns found that in Year 3, children in the least advantaged schools (ICSEA<950) achieved 2 months less growth in mathematics compared to the overall year three cohort across NSW – more than the entire length of the 2020 shutdowns.<sup>33</sup> However, no impacts were found in Year 3 reading or in the Year 4 cohort of students.

The mixed picture seen in the Australian studies is not seen in the international evidence to date. Most international studies find that school students have suffered significant drops in educational outcomes, with children from lower socioeconomic backgrounds affected more acutely.<sup>34</sup>

**Table 2 Estimates of Learning Losses in Australia**

STUDY	PERIOD	IMPACT
<b>NSW NAPLAN 2021<sup>35</sup></b>	Administered April 2021	No significant difference to 2019 results noting that there was a move from paper to online testing between the two years
<b>NSW NAPLAN Check-in assessments 2020<sup>36</sup></b>	Administered between August -October 2020	On average students were behind in most results: <ul style="list-style-type: none"> <li>▶ Year 3 reading results were 3-4 months behind</li> <li>▶ Year 5 reading and numeracy were 2-3 months behind</li> <li>▶ Year 9 numeracy were 2-3 months behind.</li> </ul> The one exception was Year 3 numeracy where students were ahead.
<b>NSW NAPLAN Check-in assessments 2021<sup>37</sup></b>	Administered twice in Term 2 and Term 4 in 2021	Overall, the average check-in reading and numeracy results for secondary year levels were below the expected trajectory at end of 2021. Primary results were generally on track, except Year 6 reading and Year 5 numeracy slightly below. Detailed results are below. <p><i>NUMERACY</i></p> <ul style="list-style-type: none"> <li>▶ Year 3 numeracy progress better than expected</li> <li>▶ Year 4 and 6 numeracy progress was as expected</li> <li>▶ Year 7, 8, 9 numeracy progress was below expected</li> </ul> <p><i>READING</i></p> <ul style="list-style-type: none"> <li>▶ Year 4 results progress was close to expected by Term 4</li> <li>▶ Year 6 reading progress was below expected</li> <li>▶ Year 9 reading progress was below expected</li> </ul>
<b>NSW University Newcastle study 2021<sup>38</sup></b>	Administered in 2020	No significant difference in average student achievement in maths and reading for study sample (in Years 3 and 4 only) <p>More specifically for low SES students:</p> <ul style="list-style-type: none"> <li>▶ Year 3 maths were 2 months behind</li> <li>▶ Year 3 reading, Year 4 reading and Year 4 maths no difference</li> </ul>



PHOTO COURTESY: FAMS



## Impact on Child Neglect and Harm

The Department of Communities and Justice publishes quarterly statistics on the number of children at risk of significant harm (ROSH), which show that compared to 2018-2019, rates of children at ROSH increased across NSW by 13.5 per cent in 2020-2021. This represents an additional 13,401 children at risk of significant harm. Some areas have experienced larger increases over the period, with a 26.7 per cent increase in South Western Sydney and a 19.2 per cent increase in the Hunter New England region.

Data on Aboriginal and Torres Strait Islander Children is only available for the 2020-21 year, and indicates that the number of children at risk of significant harm increased by 11.4 per cent from 2019-20. This compared with an increase for all children of 12.7 per cent over the same period.

**Table 3 Change in Number of Children at Risk of Serious Harm Across NSW**

DISTRICT	AVERAGE JAN 2020-DEC 2021	AVERAGE JAN 2018-DEC 2019	INCREASE
Central Coast	6,239	6,217	0.4%
Hunter New England	19,465	16,325	19.2%
Far West	1,068	963	10.9%
Murrumbidgee	7,322	6,333	15.6%
Western NSW	8,441	7,422	13.7%
Illawarra Shoalhaven	6,289	6,469	-2.8%
Southern NSW	3,772	3,225	17.0%
Mid North Coast	7,209	6,234	15.6%
Northern NSW	4,387	4,989	-12.1%
Nepean Blue Mountains	8,876	7,671	15.7%
Western Sydney	9,685	8,942	8.3%
South-Western Sydney	15,096	11,916	26.7%
Northern Sydney	4,853	3,966	22.4%
South Eastern Sydney	5,270	4,381	20.3%
Sydney	4,466	3,985	12.1%
<b>Total NSW</b>	<b>112,435</b>	<b>99,033</b>	<b>13.5%</b>

**Source:** Department of Communities and Justice, Case Worker Dashboard: 2018-2021, <https://www.facs.nsw.gov.au/resources/statistics/caseworker-statistics/dashboard>



## Impact on Babies and Infants

There is little data on the impact of COVID on babies and infants in Australia, and for this reason it has not been costed in this report.

Internationally some studies on the impacts of COVID on babies and child development indicate negative impacts, although results are mixed.<sup>39</sup> For example one US study in September 2021 found only slight differences in infant developmental scores pre- versus post pandemic.<sup>40</sup> But another US study in January 2022 in a large on-going longitudinal study of child neurodevelopment found that children born during the pandemic have significantly reduced verbal, motor, and overall cognitive performance compared to children born pre-pandemic, especially children in lower socio-economic families.<sup>41</sup>

Further, one 2022 UK study of a small group of parents of children between the ages of 8 months and 3 years found that children's skills were stronger if they had received group care during the pandemic, and that these benefits were more pronounced among children from lower-income backgrounds.<sup>42</sup>

One Australian study shows pregnant and postnatal women have reported increased anxiety and depression during COVID-19 restrictions.<sup>43</sup> New callers to the Perinatal Anxiety and Depression Australia helpline doubled during March-October 2020, as did duration of call times.<sup>44</sup> Some overseas studies have shown negative impacts on children where there was increased stress during the pregnancy.<sup>45</sup>

This issue warrants attention in the Australian context, given that the elasticity of babies' brains means that extra supports and early intervention can make a big difference.<sup>46</sup>



# Quantifying the Long-Term Costs of COVID-19 and Natural Disasters

## Mental Health and Wellbeing

Evidence indicates that the reported increases in poor mental health amongst school aged children are likely to result in poorer school performance in the years ahead, impacting school retention and lifelong earnings. However, there is currently not sufficient population-wide data to estimate these costs for the economy.

However, for each child who is impacted we would expect lost learning of between 1 to 2 years which would equate to between \$350,000 and up to \$743,000 per student in lifelong earnings.<sup>47</sup>

## Lost Education

International studies have used the period of remote schooling and calculated the long-term costs based on established links between years of schooling and future earnings.<sup>48</sup> However, given the mixed evidence of the impacts of remote learning on student outcomes in Australia, care is needed in drawing the same conclusions until more data and evidence become available.

Based on evidence from Australia and overseas, we estimate that learning losses are greatest for low SES students, given they typically would have been behind pre-pandemic, have a home environment less conducive to learning, tend to have less help from parents, and are likely to face more technology barriers.

Impact Economics and Policy estimates are based on enrolments in schools and SEIFA scores which show that 216,756 students across NSW are attending low SES schools. Of these, the average period of remote schooling was 15 weeks across 2020 and 2021. This is slightly below the average for higher SES schools, which averaged 17 lost weeks of face-to-face learning in school. This is likely due to the greater number of higher SES schools in city areas which were subject to lengthier lockdowns.

**Table 4 Range of Learning Loss for Low SES Students in NSW based on 15 weeks of remote learning<sup>49</sup>**

	2021 NAPLAN	2020 NSW CHECK-IN*	NEWCASTLE UNIVERSITY	AVERAGE
<b>Potential Weeks of Learning Loss</b>	0	18.8	4.2	7.6
<b>Lifetime Earnings Loss – NSW (\$billions)</b>	0	39.7	9.1	16.3

\* Losses are for all children, not just low SES who are likely to have experienced higher losses.

Taking the average learning loss from the three available studies, we estimate that on average students in low SES schools in NSW lost 7.6 weeks in learning over 2020-21. This results in an estimated average loss in lifetime earnings for each of these 216,756 students of \$75,000.<sup>50</sup> The total lifetime loss for this group of low SES students is estimated at \$16.3 billion, with the biggest losses falling on those local government areas that had the combination of long lockdowns and a high number of low SES children.

**Table 5** Top Twenty Local Government Areas in NSW by Educational Losses

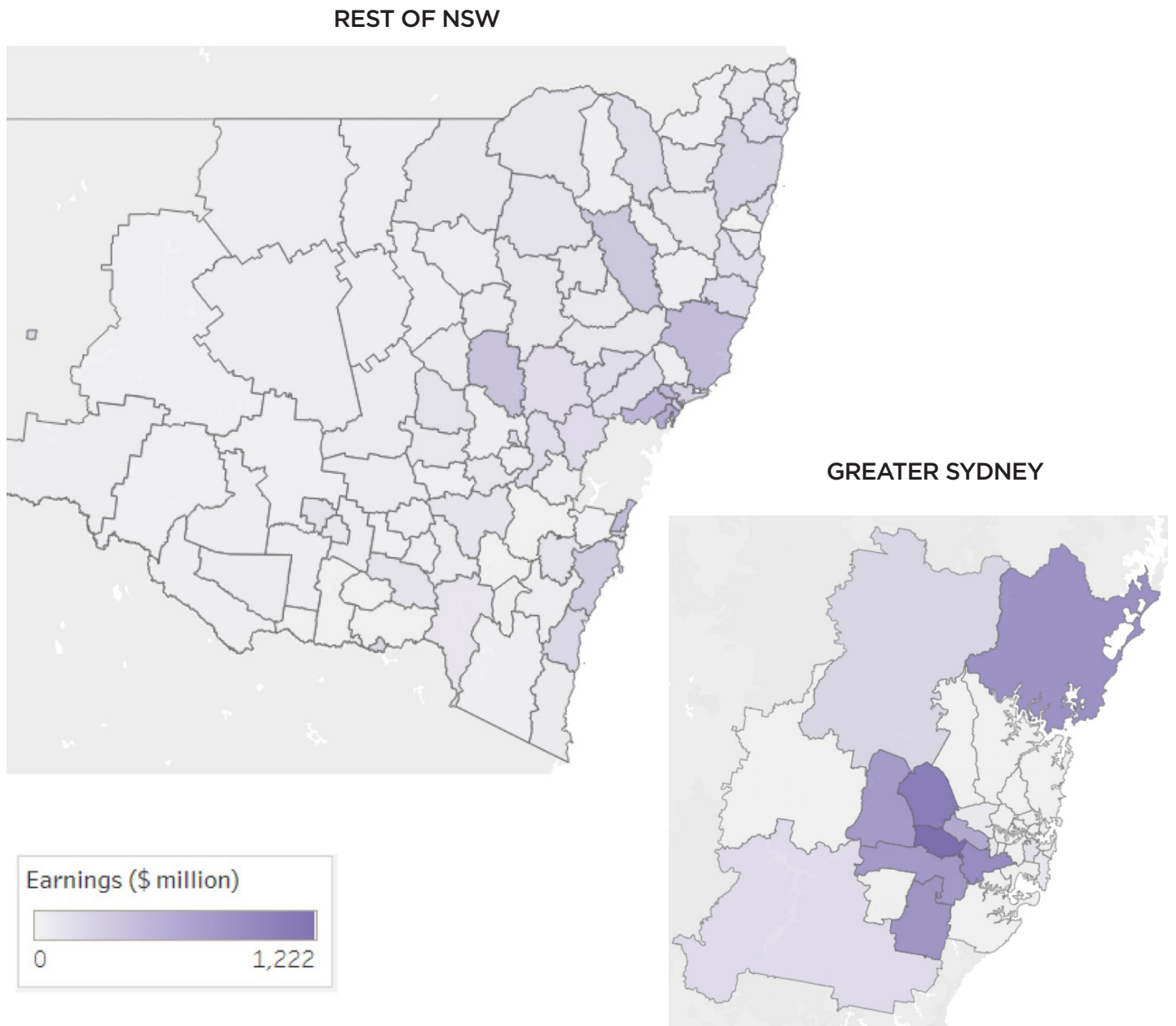
LOCAL GOVERNMENT AREA	LIFETIME EDUCATIONAL LOSSES (\$ MILLION)
Fairfield, City of	1,222
Blacktown City Council	1,062
Canterbury-Bankstown, City of	866
Central Coast Council	829
Campbelltown, City of	796
Liverpool, City of	755
Penrith, City of	741
Cumberland City Council	584
Lake Macquarie, City of	567
Maitland, City of	461
Cessnock, City of	458
Mid-Coast Council	421
Wollongong, City of	415
Dubbo Regional Council	358
Tamworth Regional Council	322
Shoalhaven, City of	268
Newcastle, City of	258
Port Stephens Council	242
Clarence Valley Council	202
Hawkesbury, City of	202

**Source:** Impact Economics and Policy Estimates (see Appendix for details)

**Note:** These estimates are conservative as they do not include the impact of delays in early childhood development highlighted in The Australian Early Development Census, the impact of floods on school closures or the increase in poor mental health. Neither do they include the impact of ongoing disengagement from school resulting from school closures and ongoing disruptions.



**Figure 6 Lifetime Lost Earnings Across NSW (\$m million)**



## Increased Child Neglect and Harm

The number of substantiations of children at risk of significant harm increased by 7.4 per cent between 2019-20 and 2020-21 in NSW. The lower increase compared to the number of reports (13.3 per cent) and children involved in risk of significant harm reports (12.7 per cent) may reflect the smaller increase in the number of children seen by a case worker (3.6 per cent) compared to the increase in reports.

Even on conservative estimates that the number of children experiencing abuse or neglect in NSW increased by 7.4 per cent in 2020-21, and that two-thirds were new cases, the total additional costs of this increase in cases of abuse is estimated at \$7.84 billion using the costs from the 2019 Deloitte report indexed for inflation.







# Reducing the Economic Cost of Poor Child Development and Wellbeing Outcomes

## Early Childhood Education and Care

The NSW Government's announced expansion of early childhood education and care programs to provide every child in NSW with access to a year of pre-school will have long-term benefits in terms of increasing the number of children starting school developmentally on track. This will be particularly important for children from low SES families who are currently less likely to attend early childhood education and care.

However, children from low SES backgrounds would benefit from access to this education from the age of 2 or 3, where benefits have been shown to accrue. Universal access to quality early childhood education and care will have long-term benefits for child outcomes and productivity.

As highlighted in the recent report *Child Care Subsidy Activity Test: Undermining Child Development and Parental Participation* at least 126,000 Australian children from poorer households are missing out on early childhood education and care partly due to the imposition of the activity test on the Child Care Subsidy.<sup>51</sup> The Commonwealth Government could remove the activity test and help ensure these children benefit from access to early childhood education and care.

## Schools at the Centre of Improving Wellbeing

The NSW Government should prioritise investments that help address the alarming impact of COVID-19 on children and young people's mental health and wellbeing. More should be invested in school partnership approaches, where schools are the central, integrated place for learning alongside access to social support and health services that overcome barriers to educational attainment and boost wellbeing.

Launched in 2012 at Doveton College in Melbourne

and now scaled up to 9 additional sites funded by philanthropy together with the Victorian Government, the Our Place approach facilitates partnerships that enable the school to be the central place for learning and whole-of-family, early intervention support services that overcome barriers to educational attainment.

The approach combines high quality early learning and schooling with adult engagement and learning, enrichment activities, and wrap-around social support and health services for the whole family. Taking a place-based approach, the initiative uses the social and physical infrastructure of the school to connect with families and connect them to relevant services. Our Place is not about delivering new services or programs; rather it assists in reshaping the service system by understanding local community need and providing dedicated, tailored resources for families that link to improved educational outcomes including attendance, retention and academic success.

## NCOSS SCHOOL GATEWAY PROJECT

The NCOSS School Gateway Project aims to bring the Our Place approach into the NSW setting, working with Ashcroft Public School in South West Sydney to deliver the Mirrung Wellbeing Hub and Strategy. It is a three year, philanthropically-funded project, with in-kind contributions and backing from NCOSS, the Ashcroft school community and local education system.

Ashcroft Public School is a vibrant P-6 school located in the Liverpool Local Government Area in South West Sydney. The school has an enrolment of approximately 320 students including 3 support unit classes catering for students with Autism Spectrum Disorders. The school population represents 31 different cultural groups and more than 70 per cent of students report using a language other than English at home. 18 per cent of students identify as Aboriginal or Torres Strait Islander. The school has an ICSEA (Index of Community Socio-Educational Advantage)



value of 891 which sits it in the bottom 10 per cent of most educationally disadvantaged schools in Australia.

Mirring – the Dharug word for belonging – will provide a focus for the increased engagement of parents, carers and families in their children’s education and learning outcomes, as well as meeting their needs for education, employment pathways and social connections. Mirring will be a place where families can belong to the school community; and by extension the school will become an important part of, and central resource for the broader community. By offering a range of social and extracurricular programs on site, it will enable families to readily access and engage with timely services and supports in an inclusive and welcoming environment, optimising outcomes for them, their children and the Ashcroft community.

Almost two years in, the project has been embraced by Ashcroft Public School as a means of encouraging parent involvement in their children’s learning, supporting families to deal with challenges before they escalate, and ensuring a more timely, responsive and accessible service system. The building blocks are now in place or well progressed, including an evaluation framework, student and family engagement, infrastructure improvements to optimise the physical environment, collaboration with the network of local social and health services, and a growing program of offerings under the Mirring banner.

With Government support NSW could not only follow in Victoria’s footsteps, but take the lead in the design and implementation of an expanded School Gateway program to help lift the educational attainment and aspirations of our state’s most disadvantaged children.

## School Tutoring Programs

In 2020 and 2021 the NSW State Government provided \$720 million in funding for free school tutoring to NSW students. The program is due to end in 2022, however there is strong academic evidence that small group tuition has the potential to significantly improve outcomes for the most disadvantaged students if properly targeted and implemented.<sup>52</sup>

The NSW evaluation of the tutoring program in 2021 and 2022 shows agreement amongst school staff that the program has had a positive impact on students’ learning progress, however the impact on student results has not yet been published.<sup>53</sup>

The Smith Family has released an evaluation of its own online school tutoring program, with promising results. The Catch-Up Learning program aimed to strengthen the skills of students struggling in literacy and numeracy by supporting them to participate in high quality, online tutoring in their own home. The pilot has shown this can make an important contribution to improving skills in these critical areas.<sup>54</sup>

The pilot included 100 students under The Smith Family’s Learning for Life program who participated in Catch-Up Learning and who were all from disadvantaged backgrounds. Students were from Years 4, 5, 7 and 8 and their 2019 school reports showed they were struggling with literacy and numeracy. The pilot involved providing one-on-one tutoring for children in the home using remote tuition.

At the end of the program, seven in 10 students had made more progress than would be expected, on average, by students over a typical six months of schooling. Impressively, six in 10 attained literacy levels equivalent to, or stronger, than their Year level peers.



As the Government moves to consider the future of the school tutoring program that is costing close to \$400 million a year to deliver, there is clear potential for high-quality tutoring to close not just the additional gaps in learning created through COVID-19, but also longstanding achievement gaps. However, not all tutoring programs are successful and high-quality delivery at scale is more complicated. Given the scale of the investment, continuation should be based on evidence-based implementation with the learning of the past two and half years used to maximise the investment and outcomes for school students.

Immediate investment in rigorous evaluation to strengthen the evidence-base is needed. This will ensure these important investments not only counter the long-term impacts of lost education due to COVID-19, but contribute towards broader targets under the National School Reform Agreement to close

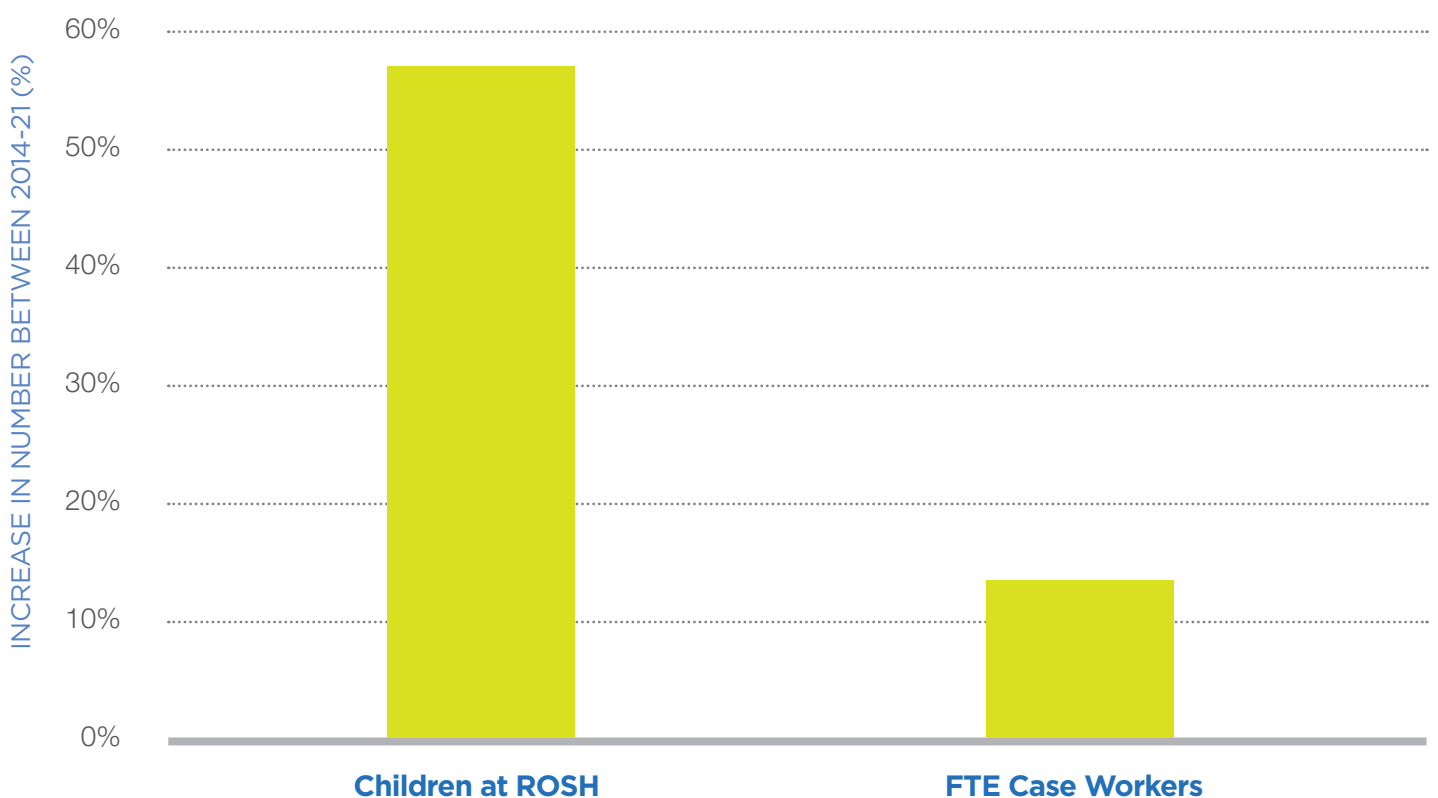
the achievement gap experienced by disadvantaged students.

## Increased Funding for Child Protection and Early Intervention Services and System Reform

Only 26 per cent of children with risk of significant harm reports in NSW are seen by a caseworker, reflecting significant unmet need for services.

Since 2014 the number of children at risk of significant harm has increased 56.9 per cent, while the number of caseworkers has increased by only 13.4 per cent. While non-Government organisations have moved to provide additional support where possible, a lack of growth funding and support for the complex work involved have made this difficult. As a result children are simply not getting the support needed, despite reports being made that they are at risk of harm.

**Figure 7 Increase in Children at Risk of Serious Harm and Case Workers (2014-2021)**



Source: DCJ Caseworker dashboard

Increased funding for services and supports, especially for Aboriginal Community Controlled Services, is urgently required to address the significant unmet need and harm being caused to the children of NSW. Consideration should also be given to developing the enabling environment to provide schools and other non-Government organisations with the ability and tools to refer children and families for additional supports without the need for DCJ caseworker involvement.

The NSW Government should also work with Aboriginal Community Controlled Services,

Aboriginal leaders and communities to implement the blueprint laid out by the Family is Culture review, starting with priority actions that will provide the foundations for a fundamentally reformed system that is community-led.

This reformed system would respect the self-determination of local communities, prioritise the voices of Aboriginal children and families in decision-making, provide holistic services that tie into one another, and be transparent and accountable to Aboriginal people.<sup>55</sup>



PHOTO COURTESY: THE PLACE, CHARLESTOWN COMMUNITY CENTRE



PHOTO COURTESY: THE HILLS COMMUNITY AID & INFORMATION SERVICE







## Conclusion

Throughout this series of reports *Aftershock: addressing the economic and social costs of the pandemic and natural disasters* we have sought to document the impact, across a number of domains, of the events of the past two and half years. There have been large increases in poor mental health, rates of family and domestic violence and housing insecurity. These will have long lasting economic and social consequences without greater investments today.

In this last report we have investigated the impact on the cohort that will both pay the highest price but also has the most to gain from greater investment today – our children. We have documented the increasing number of children starting school developmentally vulnerable, the likely impacts on children from low SES schools on lifetime earnings and the devastating impacts of increased rates of abuse and neglect experienced by children.

Increasing access to early childhood education, increased funding to support families and children at risk of significant harm, expanding the School Gateway program to enable integrated, whole-of-family health and social service delivery within the school environs in at-risk communities, and ongoing funding to support evidence-based school tutoring programs – these are all investments that can be made today which will positively impact on the development and wellbeing of children now and into the future.

Making the decision to invest today will limit the long-term costs of the pandemic on the cohort of children most affected, and limit the aftershocks of the fires, floods and pandemic that have so drastically disrupted the lives of the people in NSW.



# Appendix

## Education losses

### LOST DAYS OF SCHOOL

A search of Government media releases and local media was undertaken to document the various lockdowns by local government areas across NSW.

A list of schools by local government area, ICSEA score and student enrolment was taken from the NSW Government website for Government schools and Wikipedia for non-Government schools, with local government areas searched for those schools without this information provided.

This allowed us to estimate the number of students by LGA and the total amount of remote schooling in each LGA.

## Educational losses

### POOR MENTAL HEALTH

Children with low wellbeing lose about 8 months of learning from Year 3 to Year 7.<sup>56</sup>

### COVID-19 LOCKDOWNS

Studies were only available for 2020 impacts, during which time students experienced 7 weeks of remote learning. It was assumed that the average weekly loss would be consistent for the additional weeks of remote learning in 2021. The average weekly loss learning was multiplied by the number of weeks lost over 2020-21 to calculate the total loss learning across local government areas.

## Life-time income losses

Insufficient information was available to determine how many students were in each year of school, so it assumed that 1/13 of students were in each year. This may overestimate the losses in the first five years with students that finished school in year 10 not adequately accounted for.

Average salaries and participation rates by age were used to model expected earnings, with no increases allowed for productivity increases over the lifetime – meaning we have potentially underestimated losses.<sup>57</sup> In addition, if in future there is an increase in female participation this may also lead to an underestimate as our estimates are based on current rates of participation.

A lifetime cohort model was developed to simulate average earning by cohort to the age of 65 using ABS data.<sup>58</sup> All values are in present value.

## Increase in children at risk of serious harm

The number of children at risk of serious harm across the period 2018-19 to 2020-21 was taken from the Department of Communities and Justice dashboard for these periods.<sup>59</sup> Using an assumption based on previous data thirty percent of cases were assumed to be new, which allowed us to estimate an additional 3211 children experienced physical abuse for the first time since 2018-19.

## Cost of additional child abuse

The lifetime costs of additional child abuse were taken from the 2019 Deloitte Report and then indexed to 2021 prices using CPI figures from the ABS.<sup>60</sup>

**Table 6** Weeks of Lost Learning

		WEEKS OF LOST LEARNING	VALUE OF LEARNING LOSS \$
<b>Albury, City of</b>	Albury	11.6	184,832,074
<b>Armidale Regional Council</b>	Armidale	11.6	55,397,360
<b>Ballina Shire</b>	Ballina	11.7	52,730,510
<b>Balranald Shire</b>	Balranald	11.0	13,634,630
<b>Bathurst Region</b>	Bathurst	13.3	136,076,031
<b>Bayside Council</b>	Bayside	19.0	0
<b>Bega Valley Shire</b>	Bega	11.7	44,912,051
<b>Bellingen Shire</b>	Bellingen	11.0	0
<b>Berrigan Shire</b>	Berrigan	11.0	0
<b>Blacktown City Council</b>	Blacktown	19.0	1,062,128,148
<b>Bland Shire</b>	Bland	11.0	35,162,993
<b>Blayney Shire</b>	Blayney	11.7	27,335,214
<b>Blue Mountains, City of</b>	Blue Mountains	21.1	0
<b>Bogan Shire</b>	Bogan	12.1	16,379,621
<b>Bourke Shire</b>	Bourke	13.7	31,451,626
<b>Brewarrina Shire</b>	Brewarrina	12.0	14,031,073
<b>Broken Hill, City of</b>	Broken Hill	13.3	136,596,067
<b>Burwood Council</b>	Burwood	19.0	0
<b>Byron Shire</b>	Byron	11.7	0
<b>Cabonne Shire</b>	Cabonne	11.7	16,142,329
<b>Camden Council</b>	Camden	19.0	6,578,947
<b>Campbelltown, City of</b>	Campbelltown	19.0	795,957,285
<b>Canada Bay, City of</b>	Canada Bay	19.0	0
<b>Canterbury-Bankstown, City of</b>	Canterbury-Bankstown	19.0	865,846,683
<b>Carrathool Shire</b>	Carrathool	11.0	10,863,543
<b>Central Coast Council</b>	Central Coast	18.0	828,586,054
<b>Central Darling Shire</b>	Central Darling	13.3	13,267,579
<b>Cessnock, City of</b>	Cessnock	15.6	458,245,657
<b>Clarence Valley Council</b>	Clarence Valley	11.4	202,359,445
<b>Cobar Shire</b>	Cobar	11.0	24,233,208
<b>Coffs Harbour, City of</b>	Coffs Harbour	11.0	167,264,342
<b>Coolamon Shire</b>	Coolamon	11.0	7,717,090
<b>Coonamble Shire</b>	Coonamble	11.4	27,643,479
<b>Cootamundra-Gundagai Regional Council</b>	Cootamundra-Gundagai Regional Council	11.0	35,748,123
<b>Cowra Shire</b>	Cowra	11.0	70,204,544
<b>Cumberland City Council</b>	Cumberland	19.0	583,695,653
<b>Dubbo Regional Council</b>	Dubbo	13.7	357,667,625
<b>Dungog Shire</b>	Dungog	13.0	25,181,661
<b>Edward River Council</b>	Edward River	11.0	36,046,208
<b>Eurobodalla Shire</b>	Eurobodalla	13.3	192,419,908
<b>Fairfield, City of</b>	Fairfield	19.0	1,222,444,701



		WEEKS OF LOST LEARNING	VALUE OF LEARNING LOSS \$
Federation Council		11.0	5,354,490
Forbes Shire	Forbes	11.7	53,965,004
Georges River Council	Georges River	19.0	3,623,188
Gilgandra Shire	Gilgandra	14.7	47,183,892
Glen Innes Severn Council	Glenn Innes Severn	11.0	56,514,713
Goulburn Mulwaree Council	Goulburn Mulwaree	13.3	96,366,631
Greater Hume Shire	Greater Hume	11.0	1,048,817
Griffith, City of	Griffith	11.0	86,566,100
Gunnedah Shire	Gunnedah	11.0	72,920,430
Gwydir Shire	Gwydir	11.0	20,479,545
Hawkesbury, City of	Hawkesbury	19.0	201,926,011
Hay Shire	Hay	11.0	20,060,018
Hills Shire, The	Hills	19.0	0
Hilltops Council	Hilltops	11.0	80,858,324
Hornsby Shire	Hornsby	19.0	0
Hunter's Hill, Municipality of	Hunters Hill	19.0	0
Inner West Council	Inner West	19.0	0
Inverell Shire	Inverell	11.0	126,697,178
Junee Shire	Junee	11.0	27,203,019
Kempsey Shire	Kempsey	11.0	135,761,170
Kiama, Municipality of	Kiama	11.0	0
Ku-ring-gai Council	Ku-ring-gai	19.0	0
Kyogle Council	Kyogle	11.0	54,472,279
Lachlan Shire	Lachlan	11.0	40,683,086
Lake Macquarie, City of	Lake Macquarie	15.6	567,151,575
Lane Cove, Municipality of	Lane Cove	19.0	0
Leeton Shire	Leeton	11.0	55,134,690
Lismore, City of	Lismore	11.7	97,889,460
Lithgow, City of	Lithgow	13.3	152,677,173
Liverpool, City of	Liverpool	19.0	754,538,521
Liverpool Plains Shire	Liverpool Plains	11.0	49,846,441
Lockhart Shire	Lockhart	11.0	5,089,525
Lord Howe Island		5.0	0
Maitland, City of	Maitland	14.6	460,830,423
Mid-Coast Council	Mid-Coast	11.0	421,238,308
Mid-Western Regional	Mid-Western	11.9	143,251,793
Moree Plains Shire	Moree Plains	11.0	73,069,473
Mosman Council	Mosman	19.0	0
Murray River Council	Murray River	11.0	18,547,512
Murrumbidgee Council	Murrumbidgee	11.0	14,628,246
Muswellbrook Shire	Muswellbrook	13.0	130,983,781
Nambucca Shire	Nambucca	11.0	77,833,313
Narrandera Shire	Narrandera	11.0	39,280,982
Narrabri Shire	Narrabri	11.7	90,294,386
Narromine Shire	Narromine	12.4	42,835,636
Newcastle, City of	Newcastle	14.6	258,417,784
Northern Beaches Council	Northern Beaches	19.0	0

		WEEKS OF LOST LEARNING	VALUE OF LEARNING LOSS \$
North Sydney Council	North Sydney	19.0	0
Oberon Shire	Oberon	11.0	28,218,716
Orange, City of	Orange	12.6	148,945,734
Parkes Shire	Parkes	11.7	101,875,111
Parramatta Council, City of	Parramatta	19.0	50,705,568
Penrith, City of	Penrith	19.0	740,770,405
Port Macquarie-Hastings Council	Port Macquarie-Hastings	11.0	166,971,777
Port Stephens Council	Port Stephens	13.3	241,523,288
Queanbeyan-Palerang Regional Council	Queanbeyan-Palerang	13.3	33,468,969
Randwick, City of	Randwick	19.0	59,477,498
Richmond Valley Council	Richmond Valley	11.7	130,092,106
Ryde, City of	Ryde	19.0	0
Singleton Council	Singleton	13.0	136,072,303
Shellharbour, City of	Shellharbour	13.3	170,811,755
Shoalhaven, City of	Shoalhaven	13.3	268,051,780
Snowy Monaro Regional Council	Snowy Monaro	11.7	18,282,261
Snowy Valleys Council	Snowy Valley	11.0	74,234,212
Strathfield, Municipality of	Strathfield	19.0	60,087,719
Sutherland Shire	Sutherland	19.0	0
Sydney, City of	Sydney	19.0	100,877,193
Tamworth Regional Council	Tamworth	11.7	322,320,389
Temora Shire	Temora	11.0	24,001,365
Tenterfield Shire	Tenterfield	11.0	14,076,237
Tweed Shire	Tweed	11.0	61,273,033
Unincorporated Far West		11.0	0
Upper Hunter Shire	Upper Hunter Shire	11.7	72,129,695
Upper Lachlan Shire	Upper Lachlan	11.0	441,607
Uralla Shire		11.0	23,570,797
Wagga Wagga, City of	Wagga Wagga	11.0	98,069,974
Walcha Shire	Walcha	11.0	15,014,653
Walgett Shire	Walget	14.7	62,247,294
Warren Shire	Warren	11.4	19,614,253
Warrumbungle Shire	Warrumbungle	11.0	69,647,015
Waverley Council	Waverley	19.0	0
Weddin Shire		11.0	10,896,663
Wentworth Shire		11.0	27,986,872
Willoughby, City of	Willoughby	19.0	0
Wingecarribee Shire	Wingecarribee	15.3	13,960,817
Wollondilly Shire	Wollondilly	19.0	152,173,913
Wollongong, City of	Wollongong	19.0	414,788,330
Woollahra, Municipality of	Woollahra	19.0	0
Yass Valley Council	Yass Valley	12.3	0



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