



# Aftershock

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

## Report One – Mental Health

**IMPACT**  
ECONOMICS  
AND POLICY



**ncoss**  
NSW Council of Social Service

IMPACT ECONOMICS AND POLICY / AUGUST 2022

**IMPACT  
ECONOMICS  
AND POLICY**

# About Impact Economics and Policy

Impact Economics and Policy brings together a group of expert economists and policy specialists with experience working for government, non-for-profits and big four consulting.

Established at the start of 2022, our mission is to partner with clients for impact through providing robust evidence, fresh analysis and strategic communication to tackle Australia's biggest public policy challenges.

### WARNING

*This report includes information about poor mental health, suicide and self-harm data in NSW. Impact Economics and Policy acknowledges that behind each of these numbers are people, their families and their friends that are deeply impacted by suicide, self-harm and poor mental health. Some people may find the contents of this report distressing and confronting. If impacted in any way, please contact Lifeline, 13 11 14.*



### 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 land 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.

# Aftershock

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

### Report One – Mental Health



# Contents

Mental Health – Key Findings	<b>6</b>
NSW Timeline	<b>7</b>
Introduction	<b>8</b>
Poor Mental Health Prior to 2020	<b>10</b>
Mental Health and Young People in NSW	<b>10</b>
Aboriginal and Torres Strait Islander Mental Health	<b>13</b>
People with a Disability	<b>15</b>
Natural Disasters and Poor Mental Health	<b>16</b>
Economic Cost of Poor Mental Health	<b>18</b>
Impact of the Pandemic and Other Natural Disasters on Poor Mental Health	<b>19</b>
New Diagnoses	<b>19</b>
Presentations to Emergency Departments	<b>20</b>
Household Income and Labour Dynamics Survey	<b>22</b>
Quantifying the Costs of an Increase in Poor Mental Health	<b>24</b>
Reducing the Economic Cost of Poor Mental Health	<b>26</b>
Supporting Community Resilience and Responses	<b>26</b>
Improved Community Access to Mental Health Support	<b>27</b>
Supporting People to Live Well in the Community	<b>30</b>
Step-Up, Step-Down Services	<b>30</b>
Conclusion	<b>32</b>
Appendix	<b>33</b>
Cost of Mental Healthcare	<b>33</b>
Number of People Experiencing Poor Mental Health	<b>34</b>
Footnotes	<b>36</b>



PHOTO COURTESY: THE HILLS COMMUNITY AID & INFORMATION SERVICE

# Mental Health – Key Findings

As NSW recovered from the 2019-20 Summer Bushfires and the first case of COVID-19 was detected in Australia in February 2020, there was no indication of the upheaval and sacrifices that lay ahead.

This report series, *Aftershock: Addressing the Economic and Social Costs of the Pandemic and Natural Disasters*, explores the impacts of the pandemic and natural disasters across several key domains of wellbeing – domestic violence, mental health, child welfare and development, and housing security. The aim is to document the huge personal and economic impacts which, if left unaddressed, will leave a long-term mark on the economy of NSW and its people.

In this report, the first in the series, we look at mental health, drawing together the research and latest data to highlight the devastating impacts of the past two and half years. New analysis and modelling from Impact Economics and Policy finds that:

- ▶ Between 2018 and 2021 there was a 46 per cent increase in the number of 12-17-year-old females presenting for self-harm or suicidal thoughts.
- ▶ In 2021 there was an estimated increase of 171,615, or 21 per cent more people with self-reported mental health consistent with depression or anxiety.

There are also broader economic implications for the people of NSW. Modelling undertaken for this report highlights the expected economic losses as a result of the higher rates of depression and anxiety, which include:

- ▶ \$7.4 billion in lost productivity over the period 2021-25 due to increase in poor mental health amongst the employed population.

Evidence shows that community resilience and greater investment in services and supports can be pivotal in helping people recover from the negative shocks of the pandemic and natural disasters and

limit the long-term economic and social costs. In this report we highlight some of the additional investments needed including:

- ▶ Invest in core funding for neighbourhood and community centres to build social connection and resilience across communities responding to rising impacts of natural disasters;
- ▶ \$430 million in additional funding for community mental health to match the national average spent on these services;
- ▶ An additional 600 step-up and step-down beds to reduce both the number of admissions to acute facilities and the number of re-admissions; and
- ▶ Additional funding for the Housing and Accommodation Support Initiative and Community Living Support programs which support people with severe mental health issues to live and recover in the community, reducing rates of hospital admissions.

Since 2020 the NSW Government has recognised the significant impact of the pandemic and natural disasters on mental health, increasing funding by 20 per cent. In Victoria, however, funding was already higher on a per capita basis and has been increased by 36 per cent over the same period.

There remain significant gaps in NSW's mental health services and community supports to help those most impacted by the last two and half years of upheaval to recover and prosper. The time for investment to address these gaps is now, before the heightened levels of disadvantage outlined in this report become entrenched and additional long-term costs become unavoidable.

## 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.**

# Introduction

Almost half of all Australians will experience poor mental health in their lifetime, with one in five Australians experiencing a mental illness each year.<sup>1</sup> As a result, and due to the lack of adequate services, many experience preventable physical health conditions and mental distress, a reduction in education and employment outcomes, broken relationships and social isolation, as well as general loss of wellbeing and life opportunities. While poor mental health can often be episodic and short lived, many experience chronic psychosocial difficulties.

The economic and social costs of poor mental health are large, and have been estimated by the Productivity Commission to cost the Australian community \$220 billion per year.<sup>2</sup> This represents more than 10 per cent of Australia's Gross Domestic Product.

Evidence also suggests that in high-income countries like Australia, poverty increases the prevalence of mental health conditions due to higher levels of financial stress.

Among the poorest one-fifth of Australians, 1 in 4 people have high or very high levels of psychological distress. This compares to about 1 in 20 among the richest one-fifth of Australians.<sup>3</sup>

Services and supports can help reduce the probability of onset, the severity of symptoms, and the duration of episodes. These services and supports are delivered and/or funded by different levels of government and the private and non-government sectors in Australia.

**Table 1 Mental Health Service Provision – Australia**

Australian Government	State and Territory Governments	Private and community sectors
Medicare Benefits Schedule	Public Hospitals	Private Hospitals
Pharmaceutical Benefits Scheme	Emergency Departments	Crisis support websites and phone lines
Primary Health Networks	Residential mental health care	Community organisations
National Disability Insurance Scheme	Community mental health care	Private health insurers

Source: AIHW (2022), Mental Health Services in Australia, [www.aihw.gov.au/reports/mental-health-services/mental-health-services-in-australia/report-content/summary-of-mental-health-services-in-australia/australias-mental-health-system](http://www.aihw.gov.au/reports/mental-health-services/mental-health-services-in-australia/report-content/summary-of-mental-health-services-in-australia/australias-mental-health-system)

In the context of responding to disasters, community mental health services provided by government and non-profit providers are particularly important in supporting recovery and minimising the long-term risks of worsening mental illness.<sup>4</sup> These community-based services are focused on keeping people healthy, and on recovery from acute episodes.

However, there are significant unmet needs for mental health supports, with 38.2 per cent of people living in NSW with a mental or behavioural disorder needing more assistance with at least one activity because of their condition.<sup>5</sup>

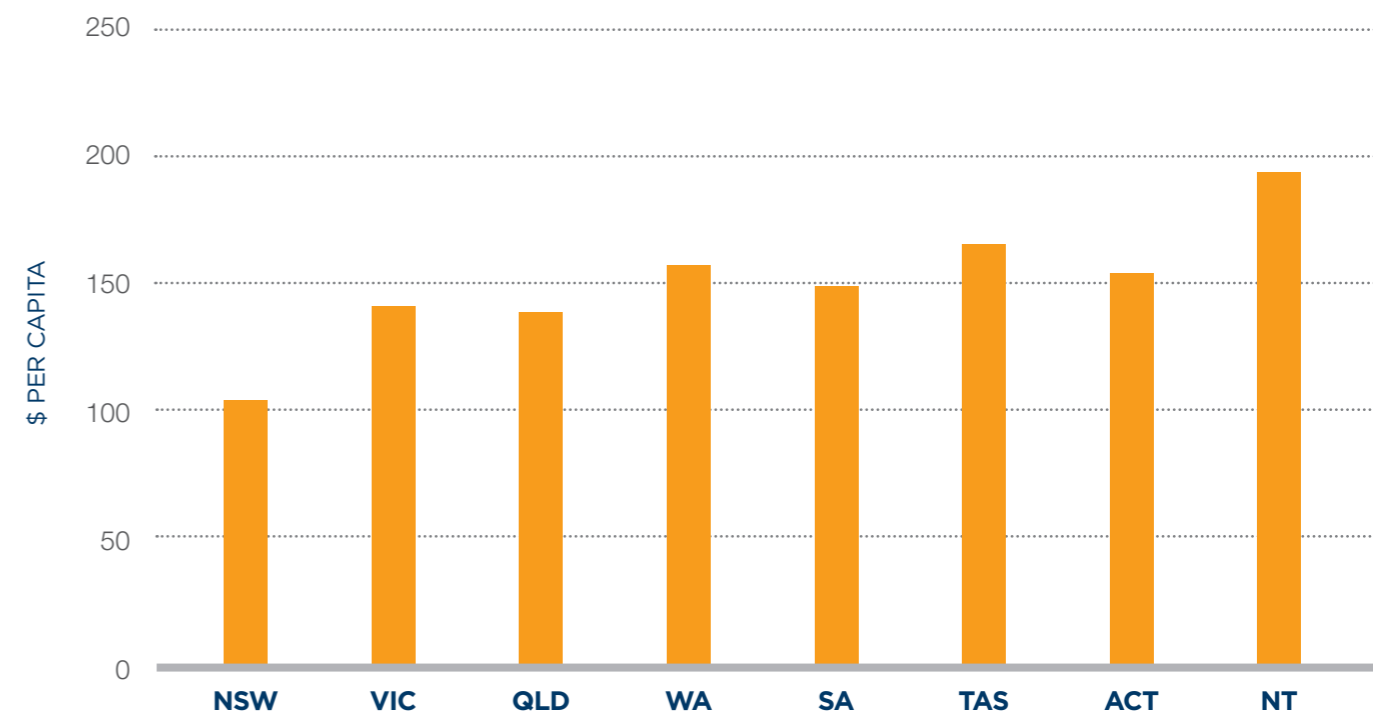
Coming into the pandemic, NSW spent a similar amount to Victoria and Queensland on mental health services, but spent significantly less on community mental health services, residential mental health services and non-government service provision.

On average, NSW spent 33 per cent, or around \$53 less, on these services per resident than other states and territories.<sup>6</sup>

Community mental health services are important in reducing the burden of mental illness and reducing the occurrence and severity of mental health episodes. As a result of historic underinvestment, NSW was in a weaker position before the COVID-19 pandemic to respond to worsening mental health across the community than many other states and territories.

While the NSW Government has increased its investment in mental health services during the pandemic, including the recent bilateral agreement signed with the Commonwealth Government, so have other states and territories. As a result, a significant shortfall in NSW investment remains.

**Figure 1 Community Mental Health Services – Per Capita Spending – 2019-20**

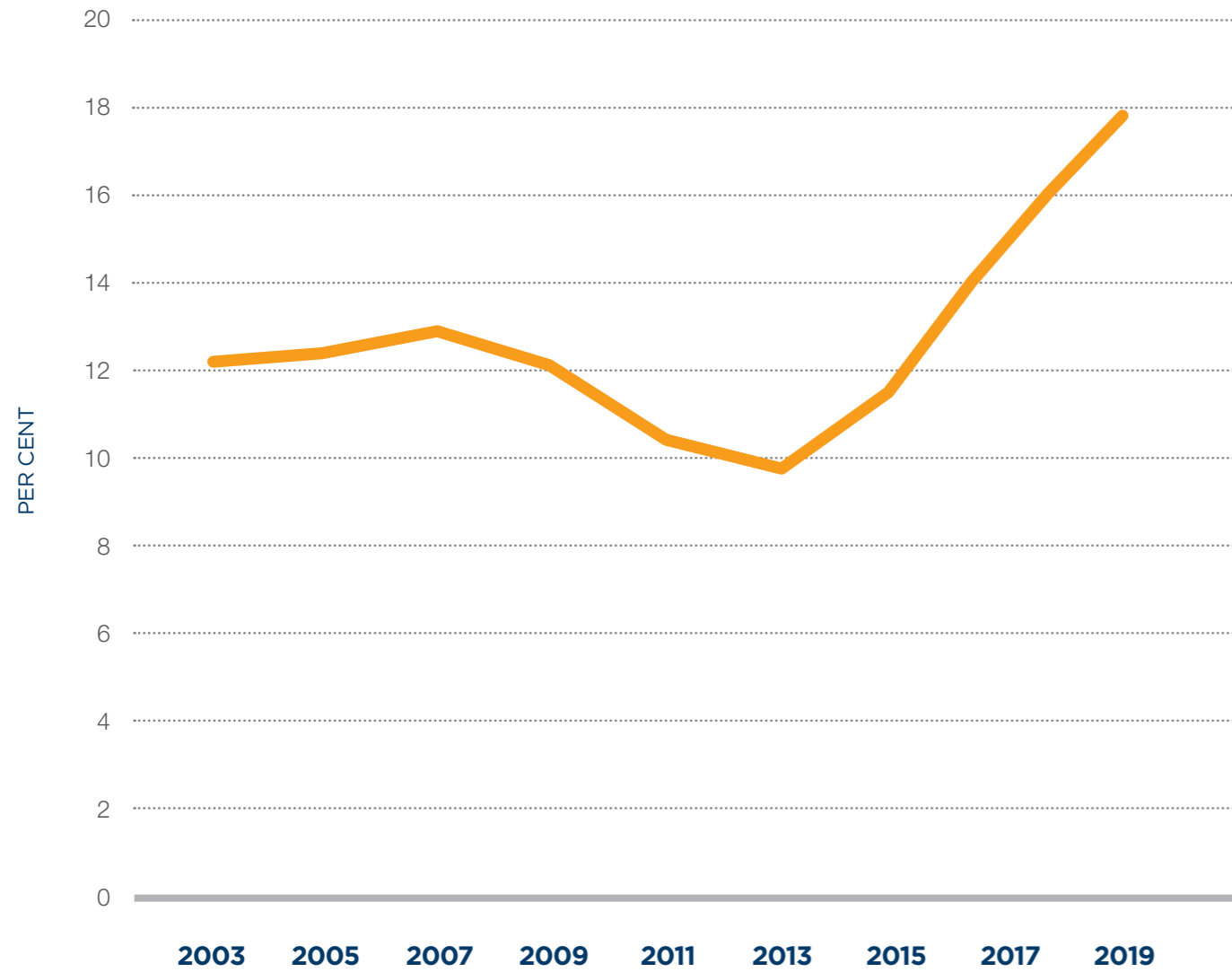


Source: AIHW, Expenditure on Mental Health Related Services 2019-20, [www.aihw.gov.au/reports/mental-health-services/mental-health-services-in-australia/data](http://www.aihw.gov.au/reports/mental-health-services/mental-health-services-in-australia/data)

## Poor Mental Health Prior to 2020

Prior to the pandemic rates of high or very high psychological distress had been increasing across the NSW population. This trend is being seen globally, and reflects both a reduction in stigma associated with reporting poor mental health and an increase in prevalence.<sup>7 8</sup>

**Figure 2 Rates of High or Very High Psychological Distress in NSW**



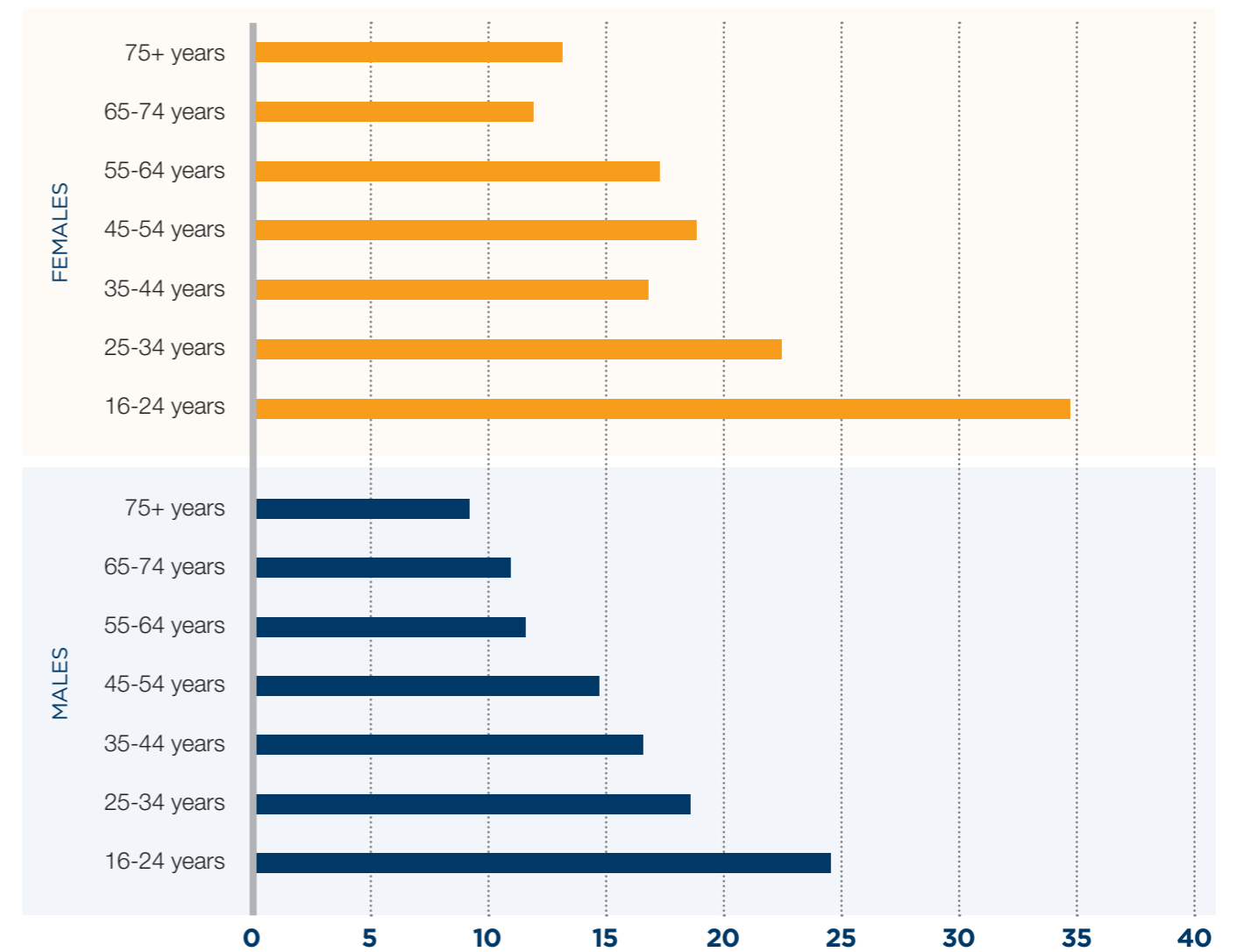
Source: HealthStats NSW (2022)

## Mental Health and Young People in NSW

Data from 2019 shows that it is young people aged 16-24, and young women specifically, who have the highest prevalence of poor mental health.<sup>9</sup> Poor mental health among young people can impact their ability to live fulfilling and productive lives. In 2019, 35 per cent of young women aged 16-24 in NSW reported having high or very high psychological distress, impacting their ability to engage in work and study at a critical time of their lives.

Approximately half of the population will be exposed to at least one traumatic event in their lifetime, with approximately 8 per cent developing post-traumatic stress disorder (PTSD). Research indicates that women are twice as likely to develop PTSD, experience a longer duration of post-traumatic symptoms and be more responsive to stimuli that remind them of the trauma.<sup>10</sup>

**Figure 3 High or very high psychological distress in adults by Sex for 2019 by Age (years per cent)**



Source: HealthStats NSW (2022)

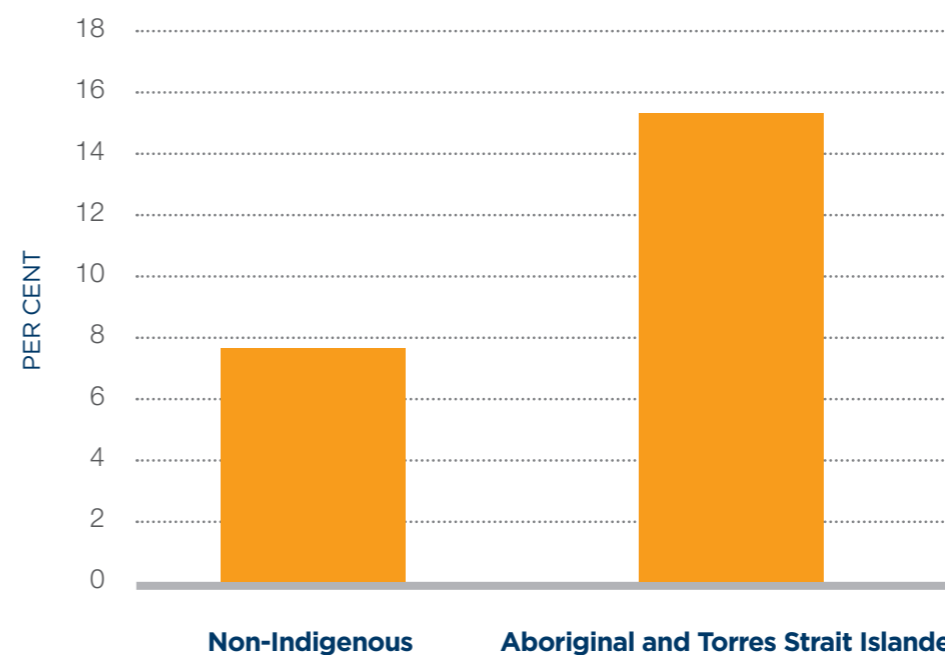


PHOTO COURTESY: THE PLACE, CHARLESTOWN COMMUNITY CENTRE

## Aboriginal and Torres Strait Islander Mental Health

The 2021 Census included questions on mental health conditions for the first time, indicating that Aboriginal and Torres Strait Islanders living in NSW are more than twice as likely to have a mental health condition than non-Indigenous people living in NSW.<sup>11</sup>

Figure 4 Mental Health Conditions 2021



PEOPLE REPORTING HAVING A MENTAL HEALTH CONDITION IN THE 2021 CENSUS IN NSW

**15.3%**  
of Aboriginal and Torres Strait Islander people

**7.7%**  
of non-Indigenous people

Source: Australian Bureau of Statistics (2022), 2021 Census: <https://www.abs.gov.au/census>

This reflects the higher risk factors for poor mental health experienced by Aboriginal and Torres Strait Islander people including widespread grief and loss, the enduring impacts of the stolen generation, unresolved trauma, loss of identity and culture due to colonisation, ongoing discrimination and racism, the lack of culturally-appropriate treatment, violence, higher rates of incarceration, and fewer economic opportunities.<sup>12</sup>

There are however important protective factors for Aboriginal and Torres Strait Islander people including social connectedness and sense of belonging, connection to land, culture, spirituality and ancestry, living on or near traditional lands, self-determination, strong Community governance and the passing on of cultural practices.<sup>13</sup>

But Aboriginal people and communities have been disproportionately impacted by recent disasters. Damage to Country, culture and sacred sites has caused immense trauma, compounded by culturally inept responses from emergency management and relief agencies.<sup>14</sup>

The NSW Aboriginal Mental Health and Wellbeing Strategy 2020-25 highlights the important role of Aboriginal Controlled Community Health Organisations (ACCHOs) in addressing the disproportionate burden of poor mental health amongst Aboriginal and Torres Strait Islander communities. There is a need for ongoing commitment to funding arrangements at both the Federal and State levels that directly fund ACCHOs to reduce gaps in culturally-appropriate and community-led services.

## IMPROVING HEALTH AND WELLBEING THROUGH CULTURALLY SAFE CARE

The Central Coast has one of the largest and fastest growing Indigenous populations in NSW. **Yerin Eleanor Duncan Aboriginal Health Service** is a not for profit, Aboriginal Community Controlled Organisation and the only Aboriginal Medical Service on the Central Coast.

It services over 4,000 Aboriginal and Torres Strait Islander people on Darkinjung country each year, providing primary health care, mental health, alcohol and other drugs services, parenting and family support, youth services, NDIS and homelessness care coordination. It aims to improve health and wellbeing outcomes through the provision of culturally appropriate care that addresses the social, emotional, cultural and spiritual wellbeing of the whole community.

Yerin's mental health service, Yadhaba, supports clients to actively manage their mental health by improving access to services through assessment, referral to specialist services, one-one counselling, care coordination, case management and participation in wellness groups. In 2020-21 it provided support to 448 clients, through 3,220 episodes of care.

As a result of the combined impacts of COVID, other disasters and cost of living pressures, Yadhaba staff have seen anxiety, depression, and feelings of being overwhelmed increase among local Aboriginal people and families. Single parents, grandparents, people who are employed and others in the community are struggling under the weight of caring responsibilities, sky-rocketing housing prices, the rising cost of everyday essentials, insecure work, and other challenges.

The service employs 4 full-time Aboriginal Health Workers who can each be managing up to 20 clients with intensive support needs at any one time. There is also a waitlist of 55 people for psychological services, and the weekly psychiatric clinic is always fully booked.

Recently, there were three suicide attempts in the local community, with the individuals concerned initially treated by the Emergency Department but

then discharged back into the community. Yadhaba is providing them with ongoing support, linking them to available services, and focusing on strengthening connections to culture, but it hasn't been possible to get them into a suitable, intensive residential program because one isn't available.

Funding from NSW Health for Yadhaba is approximately \$107,000 pa, which hasn't increased over eight funding cycles (beyond annual indexation which often does not cover mandated wage increases let alone other increased service costs). To meet demand, Yerin has expanded the support available through Yadhaba by supplementing government funding with its own income from fundraising and other initiatives, but this is not sustainable.

Available funding doesn't cover over-time, the need to backfill jobs when staff are on leave, or competitive salaries. The service contract is only for three years (subject to renewal), and reporting requirements to demonstrate outcomes at the individual, family, community and preventative level are considerable.

**'We need funding that meets rising demand, covers our costs and provides certainty. Most of all, we need to be trusted as experts and supported to develop programs that build connections to culture and provide care that is safe for our community'**

**BELINDA FIELD, CEO, Yerin Eleanor Duncan Aboriginal Medical Service**

## People with a Disability

People with a disability in NSW are more likely to experience the negative impacts of natural disasters, due to inaccessible evacuation, response services and recovery efforts. Previous studies have found people with a disability are up to four times more likely to die during a natural disaster.<sup>15</sup>

The COVID-19 pandemic has also disproportionately impacted people with a disability, including lack of access to vaccines, interruptions in disability services and supports and higher death rates.<sup>16</sup>

Even before the pandemic, people with a disability were experiencing greater disadvantage than those without a disability across all the domains covered in this series of reports, including mental health.

**People with a disability are four times more likely than people without a disability to experience high levels of psychological distress.**<sup>17</sup>

This is driven by many factors including higher risk factors for depressive symptoms such as stereotypic social and personal attitude; abuse; loss of roles; and stressors related to poverty, environmental barriers, and/ or lack of access to appropriate health care.<sup>18</sup>



PHOTO COURTESY: THE PLACE, CHARLESTOWN COMMUNITY CENTRE



# Natural Disasters and Poor Mental Health

Natural disasters like those experienced in NSW over the past two and half years have a negative impact on mental health.<sup>19</sup> The 2019 Summer Bushfires, the COVID-19 pandemic, the floods in Northern NSW, and the more recent flooding events in parts of Sydney and the Central Coast of NSW are no exception.

There are various factors which lead to poor mental health such as the displacement of family, death of a loved one, socio-economic loss, environmental loss, and lack of mental preparedness for disaster, disruption in the family bond, lack of social support and negative coping skills.<sup>20</sup>

Disasters are also unpredictable, leaving people in a state of shock. Individuals tend to deny the loss and try to escape from reality. Being in a denial state makes people more vulnerable to stress, anxiety and other different coping mechanisms. Home is a place which provides safety and security to people. But when the unavoidable situations induced by disaster damage home, property and other valuable assets, it leads to a feeling of insecurity. Death of a loved one also leaves people in a state of insecurity because the sense of love, attachment and belongingness is deprived.

**The psychological effects of disaster are more far-reaching among children, women and the dependent elderly population.**

After any disaster, they are among the most vulnerable and should be the focus of interventions to reduce impact.<sup>21</sup> Previous Australian research has also highlighted that the impacts of disaster on mental health are greatest for renters in the two lowest income quintiles.<sup>22</sup>



PHOTO COURTESY: THE HILLS COMMUNITY AID & INFORMATION SERVICE

# Economic Cost of Poor Mental Health

Poor mental health, like poor physical health, affects the ability of those impacted to participate fully and function well in their daily family and work lives. The costs associated with poor mental health include the provision of services, the informal care provided by family and friends, and the loss of participation and productivity.

The Productivity Commission has estimated that of the \$220 billion in total economic costs, the direct economic costs of mental illness including due to lost productivity and participation are between \$42.9 billion and \$69.9 billion per year.

**Table 2 Productivity Commission Estimates of Direct Economic Costs (2020)**

	\$ BILLION
Mental healthcare and related services	15.5
Informal care provided by family and friends	15.3
Loss of participation and productivity	12.2-39.1
<b>Total Direct Economic Costs</b>	<b>42.9-69.9</b>
<b>Cost of Disability and Premature Death</b>	<b>150.8</b>

Source: Productivity Commission (2020), Inquiry Report – Mental Health: [pc.gov.au/inquiries/completed/mental-health/report](http://pc.gov.au/inquiries/completed/mental-health/report)

Previous studies have estimated the individual costs in terms of absenteeism and presenteeism that accrue to individuals in the labour force.<sup>23</sup> Absenteeism costs are those associated with not attending work, while presenteeism is the lost productivity from poor mental health while at work. In addition, productivity and participation costs also accrue to those not working, and reduce participation in the labour force, estimated to cost approximately \$55,172 per adult per year.<sup>24</sup>

**Table 3 Estimates of Absenteeism and Presenteeism Costs (2020)**

Absenteeism	13,817
Presenteeism	11,288
<b>Total Absenteeism and Presenteeism Costs</b>	<b>25,104</b>
<b>Participation Costs</b>	<b>\$55,172</b>

Source: 2007 costs updated for 2020 using estimates from Cocker F et al, Depression in working adults: comparing the costs and health outcomes of working when ill. PLoS One. 2014

# Impact of the Pandemic and Other Natural Disasters on Poor Mental Health in NSW

The cumulative impact of the COVID-19 pandemic and natural disasters since the start of 2020 has had a profound impact on the people of NSW. Population-level data on mental health is not yet available, however there is mounting evidence of a significant increase in poor mental health.

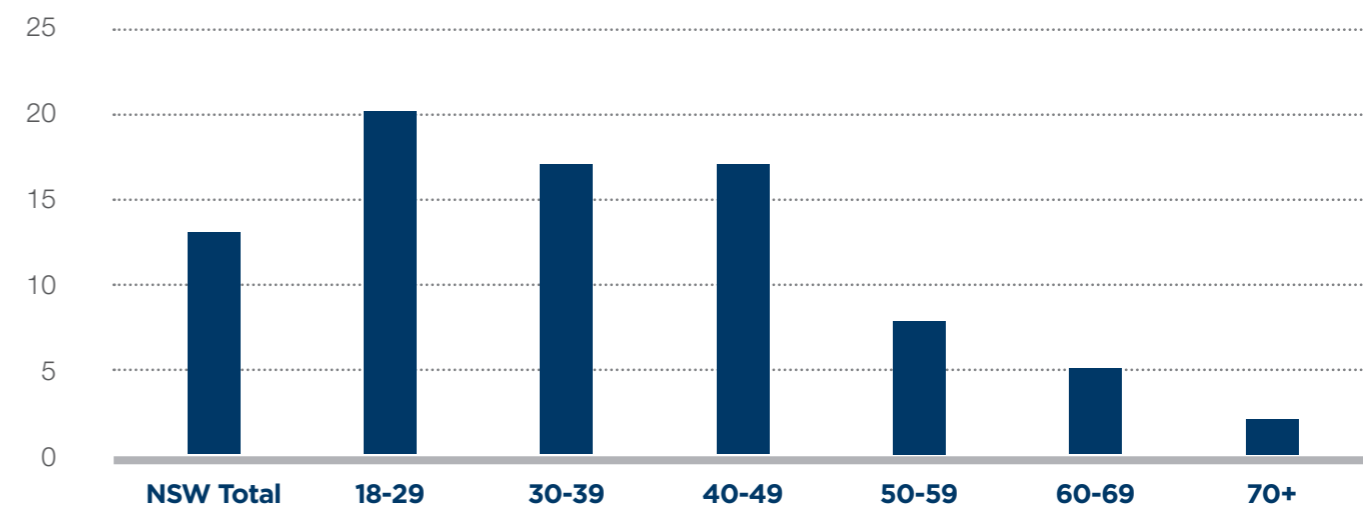
Across Australia there was a 9.3 per cent increase in the number of prescriptions for depressive disorders between 2018-19 and 2020-21, highlighting the widespread impacts on mental health across Australia. This compared to a 4.1 per cent increase in prescriptions for all other medications.<sup>25</sup>

And while there was a fall in 2020 and 2021 in the number of suicides in NSW, compared to 2019, in the first five months of 2022 there were 18.7 per cent more suspected or confirmed suicides than over the same period in 2019.<sup>26</sup>

## New Diagnoses

The Mental Health Commission of NSW has undertaken surveys in 2020 and 2021 to gain insights into the impact of the pandemic on community health and wellbeing. Their research showed that 13 per cent of the NSW adult population has developed a new mental health issue since the start of the pandemic, with 20 per cent of 18-29-year-olds developing a new mental health issue.<sup>27</sup>

**Figure 5 Proportion of people with new mental health issues diagnosed in 2020/21**



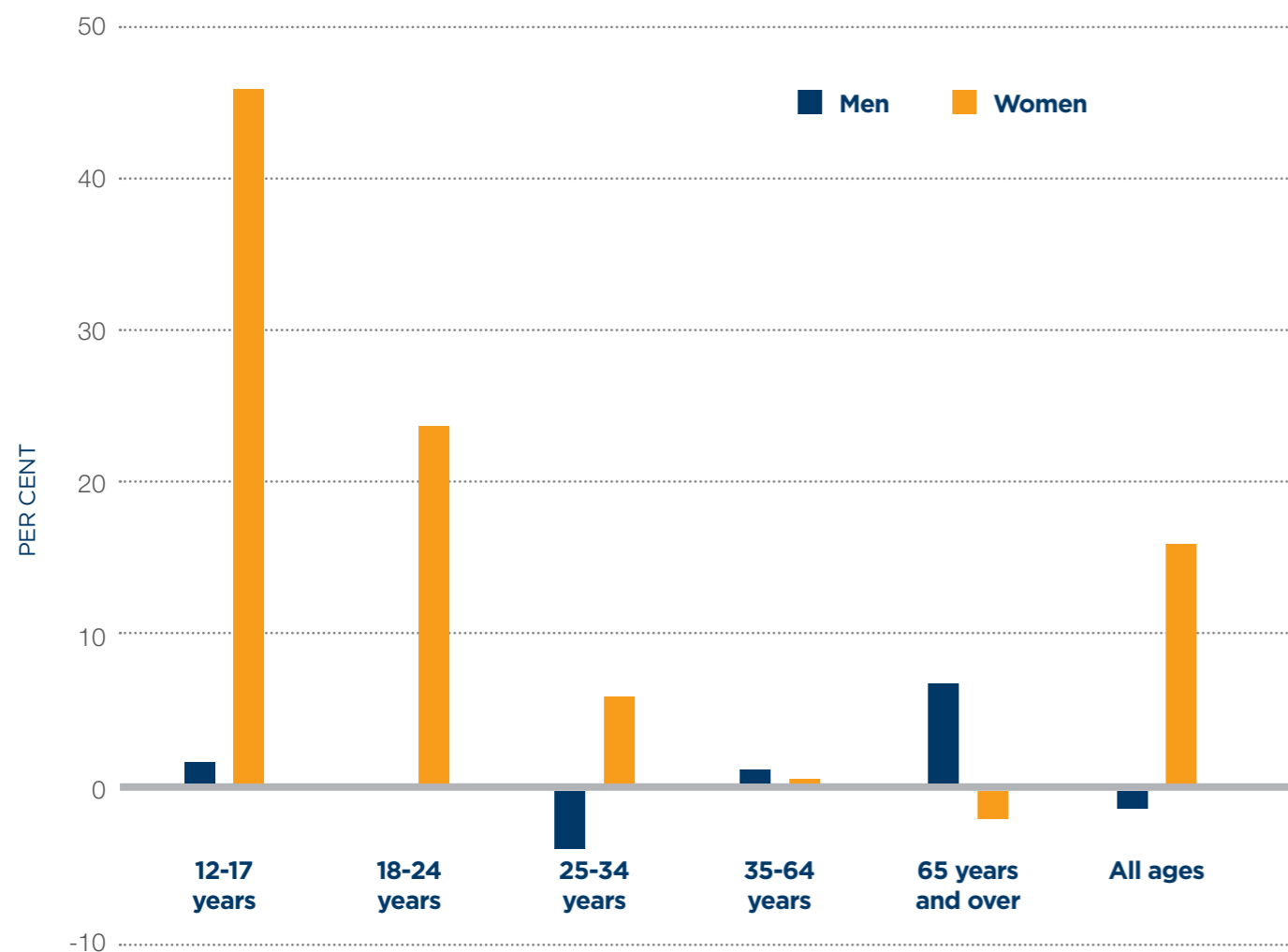
Source: Mental Health Commission NSW (2022)

## Presentations to Emergency Departments

While relying on presentations to emergency departments poses the risk of underestimating the scale of the increase in poor mental health due to people not presenting (as a result of expected wait times and concerns over contracting COVID-19) there has been a marked increase amongst some cohorts.

From 2018 to 2021 there was a 46 per cent increase in the number of 12-17 year old females presenting for self-harm or suicidal thoughts at emergency departments in NSW.<sup>28</sup>

**Figure 6**  
Increase in Emergency Department Presentations for self-harm or suicidal thoughts from 2019 to 2021 by Age and Gender



Source: NSW Health Statistics

Breaking down these statistics by geographical location for 12-17 year olds, we see variation in the impact across Local Health Districts in NSW.

**Table 4**  
Increase in Emergency Department Presentations for self-harm or suicidal thoughts from 2019 to 2021 for 12-17-year-olds by Local Health District

LOCAL HEALTH DISTRICT	2019	2021	INCREASE
Sydney LHD	975	1312	35%
South Western Sydney LHD	1435	1666	16%
South Eastern Sydney LHD	1319	1700	29%
Illawarra Shoalhaven LHD	1624	2187	35%
Western Sydney LHD	1314	1680	28%
Nepean Blue Mountains LHD	1337	1677	25%
Northern Sydney LHD	1049	1439	37%
Central Coast LHD	2104	3111	48%
Hunter New England LHD	2140	2848	33%
Northern NSW LHD	2755	3566	29%
Mid North Coast LHD	2456	4121	68%
Southern NSW LHD	1958	2840	45%
Murrumbidgee LHD	2088	2844	36%
Western NSW LHD	2996	4275	43%
All LHDs	25549	35266	38%

Source: NSW Health Stats (2022)

## Household Income and Labour Dynamics Survey

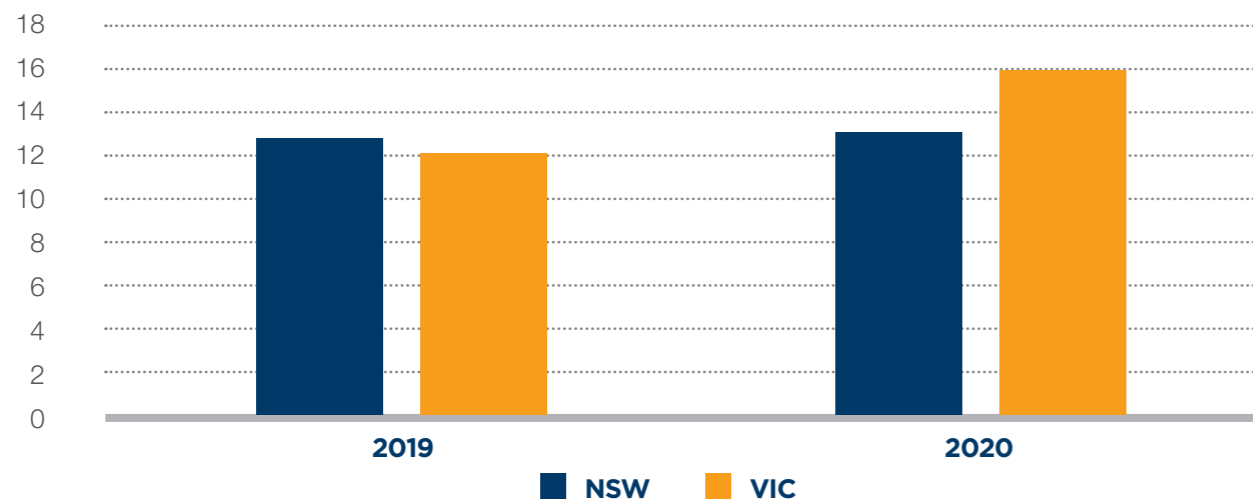
The 2020 Household Income and Labour Dynamic Survey (HILDA) provides the most comprehensive picture of the impact of natural disasters and the COVID-19 pandemic on mental health. The survey follows the same individuals over time, allowing us to isolate the impact of these events on mental health, controlling for other trends.

Studies using this data have shown that the mental health of Victorians was impacted directly by the imposition of extended lockdowns in 2020, with women who have children impacted the most.<sup>29</sup>

While the increase was larger in Victoria, there was also an increase in the number of people in NSW reporting poor mental health consistent with a clinical diagnosis of depression and anxiety between 2019 and 2020.<sup>30</sup>

We would expect to see at least the same increase witnessed in Victoria in 2020 occurring in NSW in 2021, given the cumulative impacts of the pandemic and the length of lockdowns in this state over that period.

**Figure 7**  
**Poor Mental Health Consistent with Depression and Anxiety in NSW and Victoria (SF-36 Mental Health Score <52)**



Source: Impact Economics and Policy calculations using Household Income and Labour Dynamic Survey (2021)

Based on the experience in Victoria during 2020, we estimate that rates of poor mental health consistent with depression and anxiety are estimated to have been 21 per cent higher in NSW during 2021 compared to 2020.<sup>31</sup> This represents an additional 171,615 people aged over 15 in NSW experiencing poor mental health consistent with a mental health disorder.

This estimate assumes that the 'treatment' effect of lockdowns in NSW during 2021 were the same as during Victoria in 2020. While the lockdowns were of similar duration, it is possible that the cumulative impact of the pandemic and natural disasters resulted in a greater impact in NSW during 2021. It will not be possible to ascertain this impact until the next wave of HILDA is released later in 2022.



PHOTO COURTESY: THE PLACE, CHARLESTOWN COMMUNITY CENTRE

# Quantifying the Costs of an Increase in Poor Mental Health

An increase in the number of people in NSW experiencing poor mental health will have associated economic and social costs, including increased expenditure on mental health services, reduced participation in the labour market, and increased costs associated with absenteeism and presenteeism. Based on previous research Impact Economics and Policy estimates that **an additional 171,615 people in NSW experienced poor mental health consistent with depression or anxiety in 2021.**

While many people will recover, this increase in the number of people with poor mental health, particularly those engaged in work, can be expected to have ongoing economic and health impacts.<sup>32</sup>

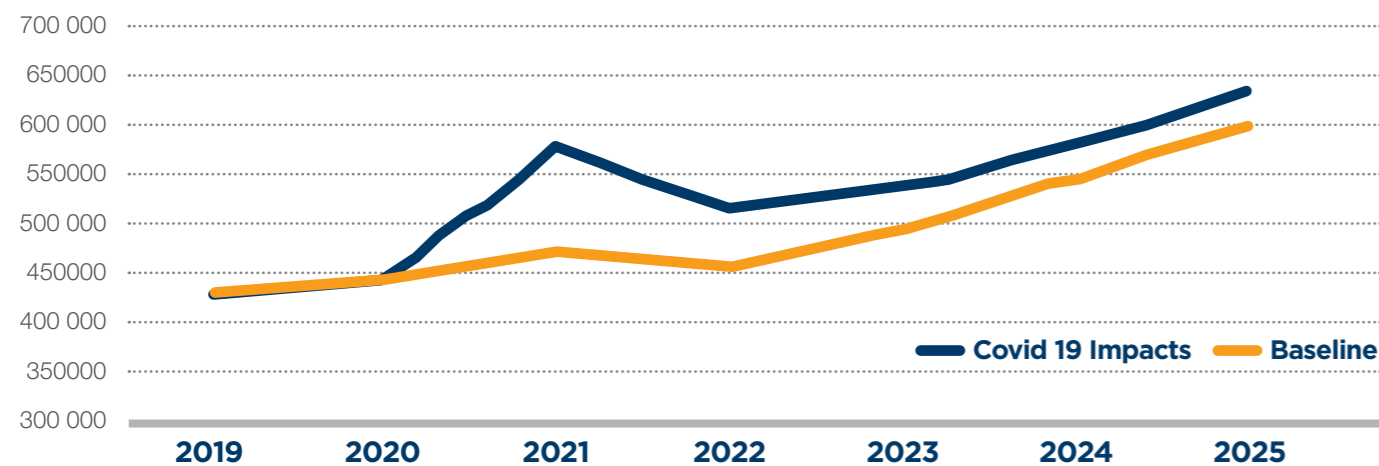
To estimate the costs associated with increased rates of poor mental health, it is first necessary to model the impact of the pandemic on the rates of depression and anxiety within the working population. To do this we use findings from a study using the Household Income and Labour Dynamic Survey that isolated the impacts of the pandemic in Victoria on mental health, finding that rates of poor mental health (MH-5<52) increased by 2.6 percentage points.<sup>33</sup>

We assume that these population-wide impacts are attributable to the population of employed people in

NSW. In fact, the average rates of poor mental health in Victoria among the working population declined more than the rest of the population between 2019 and 2020, making this a conservative assumption. In addition, we do not attribute any of the increase in poor mental health in NSW during 2020 among people employed to pandemic or other natural disaster impacts (1 percentage point).

Impact Economics and Policy estimates that, on average, during 2021 an additional 108,000 workers in NSW experienced depression or anxiety because of the pandemic. The cost in terms of increased rates of presenteeism and absenteeism are estimated at \$2.8 billion in 2021.<sup>34</sup>

**Figure 8 Increased rates of Anxiety and Depression Amongst Working Age Population**



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

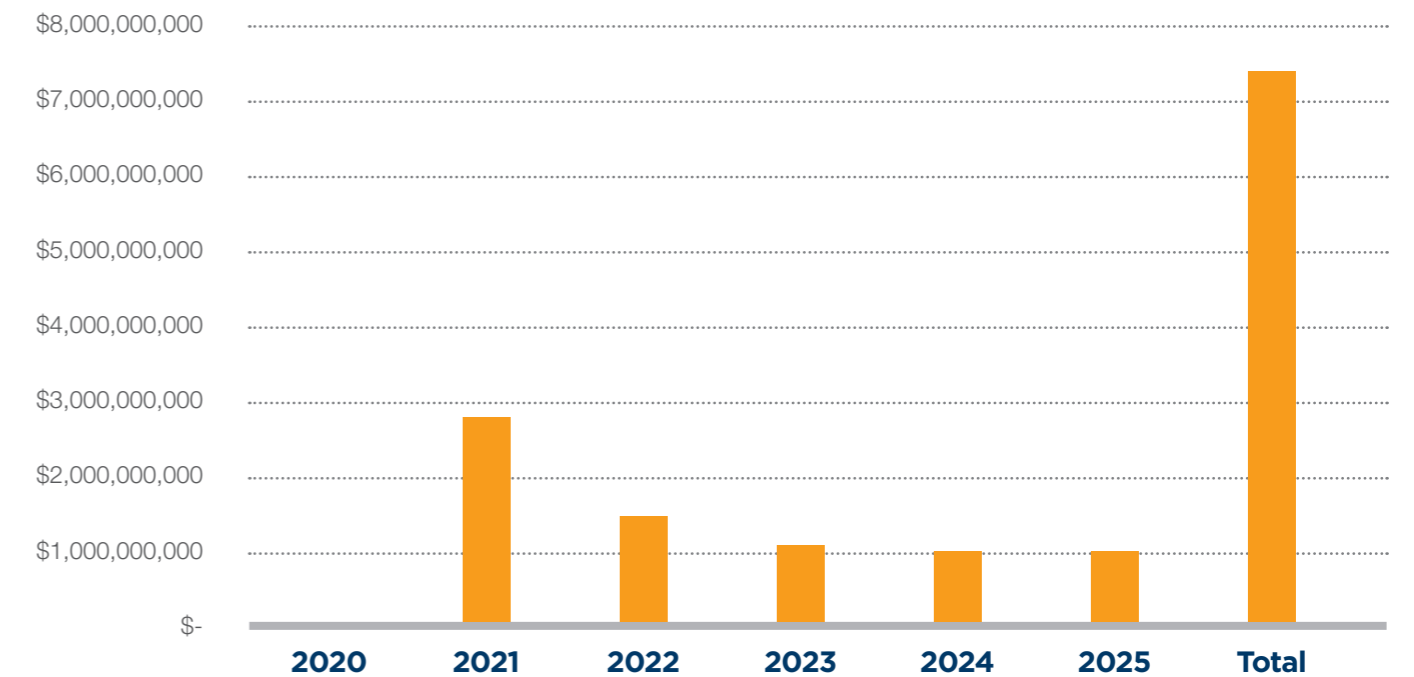


PHOTO COURTESY: THE PLACE, CHARLESTOWN COMMUNITY CENTRE

Over time people will generally recover, with higher rates of recovery if treatment is received.<sup>35</sup> Assuming similar rates of treatment and recovery found pre-pandemic, Impact Economics and Policy estimates that over the period 2022-2025 an additional 166,000 people in work will experience depression or anxiety at a total cost of \$4.6 billion.

In total, over the period of 2021-2025, the additional costs associated with the increased rates of anxiety and depression amongst the working population in NSW could reach \$7.4 billion.<sup>36</sup>

**Figure 9 Increased Costs Associated with Higher Rates of Poor Mental Health Amongst Employed Persons in NSW**



Source: Impact Economics and Policy Modelling (see Appendix for details of approach)

# Reducing the Economic Cost of Poor Mental Health

Evidence indicates that treatment and supports are effective in increasing the probability of remission from anxiety and depression and reducing the probability of relapse.<sup>37</sup>

The NSW Government will spend approximately \$2.9 billion on mental health services in 2022-23, which is an impressive 21 per cent increase in annual funding since 2020-21. However, it compares to a 36 per cent increase in funding in Victoria over the same period, which spends more per person on mental health services. As a result, Victoria now spends close to 20 per cent more per person on mental health services than NSW.

**Table 5 Spending on Mental Health by Victorian and NSW Governments**

	NSW TOTAL (\$M)	NSW PER CAPITA (\$)	VICTORIA (\$M)	VICTORIA PER CAPITA (\$)
<b>2020-21 Budget</b>	2400	294	2019	302
<b>2021-22 Budget</b>	2600	319	2353	362
<b>2022-23 Budget</b>	2900	351	2750	417

Source: NSW Budget 2021-22 and 2022-23 and Victorian Budget 2021-22 and 2023-24

## Supporting Community Resilience and Responses

Generalist, place-based community services like neighbourhood centres, multicultural services, youth services and Aboriginal Community Controlled Organisations play an important and ongoing role in addressing multiple aspects of disadvantage by fostering social participation and inclusion. These types of services, often not considered part of the mental health system, promote connection and social participation which can help people to stay well in the community for longer. They can assist people to access more intensive services if required; and support people who have had a period of acute mental health care to stay connected in the community.

The pandemic and recent natural disasters have also demonstrated the ability of place-based services to quickly respond to the needs of local communities, in the immediate aftermath and as recovery progresses. They play a critical role in disaster response, recovery and resilience-building. For many, these local services are able to provide more culturally appropriate, accessible and less stigmatising mental health support.

## BELONG BLUE MOUNTAINS – SUPPORTING WELLBEING THROUGH SOCIAL SUPPORT AND CONNECTION

**Belong Blue Mountains Community and Neighbourhood Services is based in NSW and encompasses Katoomba, Mid Mountains and Lower Mountains Neighbourhood Centres.**

Belong operates under a framework of enhancing social capital and sustainable community networks, as well as building the capacity and resilience of local people. It does this through offering over 50 social, health and wellbeing activities like book clubs, volunteer lunches, drop-in centres and social support groups, in addition to services for families, children, older people and people with disability.

Belong also provides structured mental health outreach support using validated programs, such as the REACH Wellbeing Group which is a workshop for the growth and development of people living with bipolar disorder and depression.

The Local Health District has also funded Belong to run peer-led recovery groups to build the capacity of participants with lived experience of mental illness to develop, run and sustain their own support groups.

A 2015 study from Charles Sturt University on community resilience in the Blue Mountains area found that local community organisations like Belong play a key role in providing assistance to, and supporting the wellbeing of vulnerable people and families in times of disaster. This is primarily due to their knowledge of and contact with local vulnerable people, but is also heavily contingent on their available resources and funds to do so.<sup>38</sup>

The Queensland Government recently almost doubled core operational funding to its network of 127 neighbourhood and community centres. This recognised the role these community assets play in providing practical assistance, promoting wellbeing and connection, and supporting those experiencing disadvantage.

Similar investment in core operational funding for NSW’s neighbourhood centres and other trusted, place-based services would bolster essential social infrastructure in communities impacted by multiple disasters.

## Improved Community Access to Mental Health Support

NSW currently spends \$53 per person below the national average on community mental health. Increasing spending to the national average would equate to an additional \$430 million in funding per year, supporting new service models to provide enhanced early intervention services, psychosocial support, continuity of care and rehabilitation services.<sup>39</sup>

The Productivity Commission Inquiry into Mental Health stressed that all governments need to increase funding for mental health, estimating that at least 154,000 people across Australia with severe and complex mental illness are missing out on psychosocial support services.

## LIKEMIND

**LikeMind** is an integrated service model that supports adults experiencing chronic mental health conditions. The model involves the collocation of services in one central site.

Clients have access to both clinical and non-clinical services including mental health care, alcohol and drug services, and physical health care, along with vocational and accommodation support services.

The service model has been introduced successfully both within Australia and overseas, and provides a best practice model.

As well, enhanced funding for Aboriginal Community Controlled Health Organisations to deliver culturally-appropriate care in community would help address the additional burden of poor mental health experienced by Aboriginal people in NSW.

Priorities for action should include both clinical and non-clinical programs in the community by organisations with a strong local presence and the capacity to respond to people's needs in the right place at the right time.

## CHLOE'S STORY — CHALLENGES IN ACCESSING TIMELY, APPROPRIATE SERVICES IN REGIONAL NSW

Chloe is a young Aboriginal woman from regional NSW who is a program participant with a youth service, which seeks to equip young people with the tools to confidently engage in education, community and employment.

She has lived experience of managing mental health issues and is extremely passionate about improving access to mental health services and youth suicide prevention in her community.

Chloe has spoken publicly about the difficulties she has experienced navigating the mental health system, and the challenges trying to access timely mental health services in her community. Chloe has talked about her condition escalating to the point where she needed to access emergency and clinical care at the closest under-resourced and under-staffed Children's Hospital. In particular, she has highlighted that there is only one mental health facility with 12 beds for young people under the age of 16 in the region where she lives.

Chloe's story demonstrates the particular challenges faced by young people in regional NSW, where there are not enough community-based mental health support services catering to different levels and times of need, that would help young people access the right support at the right time.



PHOTO COURTESY:  
THE PLACE, CHARLESTOWN  
COMMUNITY CENTRE

## Supporting People to Live Well in the Community

There are also specialised programs such as the Housing and Accommodation Support Initiative (HASI) and Community Living Support (CLS) which provide intensive support to people with mental health conditions to enable them to live and participate in the community. The types and number of supports are flexible and may change over time as need changes.

People with stable housing who are also able to access rehabilitation and support programs stay well for longer; and have more chance of completing their educational goals, gaining and sustaining employment and experiencing social participation.<sup>40</sup> This greatly impacts both on admission and readmission rates to hospital thus reducing the need for more acute services in mental health facilities.

## Step-Up, Step-Down Services

There is significant evidence from other jurisdictions in Australia of the benefits of 'step-up, step-down' services that support people to transition from psychiatric inpatient facilities back into the community. These services provide an opportunity for a person to be discharged and supported to manage when returning home, as well as providing more intense support to reduce admissions for people at risk of deterioration.<sup>42</sup> As a result, these services free up capacity in in-patient units and reduce the risk of 'revolving door' admissions.

In addition, step-up, step-down services can help reduce the risk of suicide following discharge from inpatient units. The current risk of suicide at time of discharge in NSW is 100 times the general population risk.<sup>43</sup>

The University of NSW undertook an evaluation of the HASI program in 2012 and found it reduced mental health-related hospital admissions by 24 per cent; emergency department presentations by 51 per cent after two years of participation. Overall it delivered an estimated \$30 million in savings each year compared to an allocated budget of \$118 million for 4 years.<sup>41</sup>

Additional investment in specialised programs like HASI and CLS, along with place-based services, would ensure a continuum of support in the community and boost the capacity of the service system to address the gaps for people at risk of or experiencing poor mental health, as identified by the Productivity Commission.

Step-up, step-down services have been found to deliver long-term cost savings due to reduced readmissions, with a short-term ROI of 1 and a long-term ROI of 5.6.<sup>44</sup>

There are currently a limited number of step-up, step-down services in NSW in comparison to other states such as Victoria, Western Australia and Queensland.<sup>45</sup> While the 2019 NSW Budget included funding for 260 dedicated step-down beds associated with the Pathways to Community Living Program, it has been estimated that a further 600 beds which are both step-up and step-down are required, at an annual recurrent cost of \$120 million.<sup>46</sup>

## LIBBY'S STORY — TRANSITIONING BACK TO THE COMMUNITY

**Libby is a 29-year-old woman who was diagnosed with bipolar disorder and has been in and out of mental health facilities since her late teens. When transitioning from an inpatient unit in hospital to a Step-Up/Step-Down facility, community mental health workers collaborate with her to identify skills and steps for her recovery journey.**

Libby identifies a number of goals including living a healthier lifestyle, rebuilding the relationship with her family and exploring opportunities to participate more in the community, as well as identifying strategies for wellbeing and how to maintain this when she exits the facility.

Libby is allocated several sessions with a Family Engagement worker to meet and work with her and her family to restore her relationships, and Libby's parents are provided with relevant information and details of local Carer Support groups they can contact for additional support.

A community mental health worker meets with Libby two to three times a week to assist her in designing the actions required to meet her goals, including (but not limited to):

- ▶ **developing her meal planning and preparation skills, focusing on healthy eating**

- ▶ **wellness planning**
- ▶ **identifying and connecting her with activities that align to her interests, such as community groups**
- ▶ **exploring options and supporting her to engage in local sporting events and exercise groups · developing strategies to address any barriers in reaching her goals.**

Upon her exit from the service, Libby is better connected with her family, friends, local services and the community, and has an improved resilience and capacity to self-manage and seek help with regard to her mental and physical health.



# Conclusion

Over the past two and half years, the people of NSW have experienced our first recession in 30 years, public health orders that significantly curtailed day-to-day activities including schooling, shopping and travel, and the ongoing health consequences of a pandemic that, as of July 2022, had taken 3,400 lives.

At the same time, communities across NSW have endured multiple natural disasters, including the 2019-20 Summer Bushfires and the 2021 and 2022 floods.

This report has highlighted the heavy and ongoing toll of these events on the mental health of people in NSW, including Aboriginal and Torres Strait Islanders and people with disability. It illustrates the urgent need for additional, culturally appropriate services and supports in the community.

There has been a substantial increase in emergency department presentations and self-reports of poor mental health since the start of the pandemic. And it is concerning to see that in the first 5 months of 2022 there were 18.7 per cent more suspected or confirmed suicides than over the same period in 2019.

The estimated cost of increased rates of absenteeism and presenteeism alone equates to over \$7.4 billion in lost productivity over the period to 2025. These costs are likely to be an underestimate as they assume people accessing services and recovering from poor mental health at the same rate as before the pandemic.

Investing in accessible, community-based services will help address the ongoing impact of the pandemic on mental health, ensure a continuum of support and reduce the long-term impacts on productivity.

Sustainably funded place-based services can provide connection, social participation and practical assistance, and are essential community assets in times of disaster.

Community mental health services are critical to keeping people well and out of hospital, but are significantly underfunded in NSW compared to the rest of Australia. While recent increases in funding are a positive step, an urgent injection of \$430 million per year is required to bring NSW up to the average level of expenditure on community mental health services across other states and territories.

# Appendix

## Cost of Mental Health Care

The cost of absenteeism and presenteeism is based on the 2014 study by Cocker et al, which found for people experiencing depression and anxiety the cost of absenteeism on average was \$9,826 and the cost of presenteeism \$7,824 in 2007 dollars. These costs were indexed by the wage price index to get equivalent labour productivity costs for the period 2020-2025.

YEAR	ABSENTEEISM (\$)	PRESENTEEISM (\$)	TOTAL (\$)
2007	9626	7864	17490
2008	9999	8169	18168
2009	10373	8474	18847
2010	10705	8745	19450
2011	11099	9067	20166
2012	11503	9398	20901
2013	11856	9686	21542
2014	12147	9923	22070
2015	12427	10152	22579
2016	12696	10372	23069
2017	12956	10584	23540
2018	13225	10805	24030
2019	13547	11067	24614
2020	13817	11288	25104
2021	14193	11595	25789
2022	14581	11912	26492
2023	14978	12236	27215
2024	15387	12570	27957
2025	15806	12913	28719

## Number of People Experiencing Poor Mental Health

A Markov model was constructed for two scenarios – the base arm and the pandemic arm. The base arm had no increase in the percentage of people experiencing depression and anxiety in 2021, and the pandemic arm had a population wide increase consistent with the increase observed in Victoria during 2020 as reported by Butterworth et al 2021.

From their original state individuals received treatment, stayed depressed/anxious, recovered and relapsed. The transition probabilities were taken from Cocker et al.

TRANSITION PROBABILITIES	
Depressed – Treatment	0.208%
Depressed – No Treatment	0.167%
Recovered – Treatment	0.107%
Recovered – No Treatment	0.517%
Relapse – Recovered, treatment	0.12%
Relapse – Recovered, no treatment	0.25%

Based on these transition probabilities and assuming five per cent of the population experiences poor mental health for the first time, we estimated the number of people experiencing poor mental health over time.

YEAR	COVID-19 IMPACTS	BASELINE	ADDITIONAL
2019	826425	826425	0
2020	857270	857270	0
2021	1029030	857415	171615
2022	954918	866177	88740
2023	1009337	944875	64462
2024	1101229	1044108	57121
2025	1204405	1149698	54707

We undertake the same analysis using figures for people in the labour force, allowing a different base number but assuming the same transition probabilities and treatment impacts from the pandemic.

YEAR	COVID-19 IMPACTS	BASELINE	ADDITIONAL
2019	429450	429450	0
2020	446850	446850	0
2021	579595	471570	108025
2022	514260	458402	55859
2023	537043	496467	40576
2024	582713	546757	35955
2025	635241	600805	34436

These estimates are then used in conjunction with the cost estimates to model the economic impact of the increase due to higher presenteeism and absenteeism costs.

YEAR	ADDITIONAL COSTS
2020	\$ -
2021	\$2,785,831,087
2022	\$1,479,810,726
2023	\$1,104,263,118
2024	\$1,005,194,913
2025	\$988,974,569
<b>Total</b>	<b>\$7,364,074,414</b>

# Footnotes

1. Productivity Commission (2020), Inquiry Report – Mental Health: [pc.gov.au/inquiries/completed/mental-health/report](http://pc.gov.au/inquiries/completed/mental-health/report)
2. Ibid.
3. Isaacs AN, Enticott J, Inder B. Lower Income Levels in Australia Are Strongly Associated With Elevated Psychological Distress: implications for healthcare and other policy areas *Front Psychiatry*. 2018; 9: 536
4. Davidson, J. R., & McFarlane, A. C. (2006). The extent and impact of mental health problems after disaster. *J Clin Psychiatry*, 67(Suppl 2), 9-14.
5. Australian Bureau of Statistics (2021), Survey of Disability and Carers 2018, Tablebuilder.
6. AIHW, Expenditure on Mental Health Related Services 2019-20, <https://www.aihw.gov.au/reports/mental-health-services/mental-health-services-in-australia/data>
7. Pescosolido BA, Halpern-Manners A, Luo L, Perry B. Trends in Public Stigma of Mental Illness in the US, 1996-2018. *JAMA Netw Open*. 2021;4(12):e2140202. doi:10.1001/jamanet-workopen.2021.40202
8. World Health Organisation (2022), Website: Mental Health: [https://www.who.int/health-topics/mental-health#tab=tab\\_1](https://www.who.int/health-topics/mental-health#tab=tab_1)
9. Health Stats NSW – High or Very High Psychological Distress in Adults by Sex for 2020: [https://www.healthstats.nsw.gov.au/#/indicator?name=-men-hidistress-phs&location=NSW&view=BarHorizontal&measure=prevalence&groups=Period\\_Sex&compare=Sex\\_Period&filter=Period\\_2020&filter=Sex\\_Persons\\_Females\\_Males](https://www.healthstats.nsw.gov.au/#/indicator?name=-men-hidistress-phs&location=NSW&view=BarHorizontal&measure=prevalence&groups=Period_Sex&compare=Sex_Period&filter=Period_2020&filter=Sex_Persons_Females_Males)
10. Rasmusson, A. M., & Friedman, M. J. (2002). Gender issues in the neurobiology of PTSD. In R. Kimerling, P. Ouimette, & J. Wolfe (Eds.), *Gender and PTSD* (pp. 43-75). The Guilford Press.
11. Australian Bureau of Statistics (2022), Australia: Aboriginal and Torres Strait Islander population summary: <https://www.abs.gov.au/articles/australia-aboriginal-and-torres-strait-islander-population-summary>
12. Dudgeon, P., Milroy, H., & Walker, R. (2014). *Working together: Aboriginal and Torres Strait Islander mental health and wellbeing principles and practice*. Telethon Kids Institute, Kulunga Aboriginal Research Development Unit, Department of the Prime Minister and Cabinet (Australia).
13. Calma, T., Dudgeon, P. and Bray, A. (2017), Aboriginal and Torres Strait Islander Social and Emotional Wellbeing and Mental Health. *Aust Psychol*, 52: 255-260. <https://doi.org/10.1111/ap.12299>
14. Williamson, B. (2022). Aboriginal community governance on the frontlines and faultlines in the Black summer bushfires (Discussion Paper No.300/2022) Centre for Aboriginal Economic Policy Research, Australian National University. <https://doi.org/10.25911/V482-AE70>
15. Villeneuve M (2020), What People with Disabilities Told Us About Their Experiences of Disasters and Emergencies, The Conversation: <https://theconversation.com/nobody-checked-on-us-what-people-with-disability-told-us-about-their-experiences-of-disasters-and-emergencies-151198#:~:text=A%20UN%20survey%20on%20disability,when%20appropriate%20information%20was%20available>.
16. Bosworth, Matt & Ayoubkhani, Daniel & Nafilyan, Vahé & Foubert, Josephine & Glickman, Myer & Davey, Calum & Kuper, Hannah. (2021). Deaths involving COVID-19 by self-reported disability status during the first two waves of the COVID-19 pandemic in England: a retrospective, population-based cohort study. *The Lancet Public Health*. 6. 10.1016/S2468-2667(21)00206-1.
17. AIHW (2022) Health of People with a Disability: <https://www.aihw.gov.au/reports/australias-health/health-of-people-with-disability>
18. World Health Organisation (2014), Social Determinants of Mental Health: [https://apps.who.int/iris/bitstream/handle/10665/112828/9789241506809\\_eng.pdf](https://apps.who.int/iris/bitstream/handle/10665/112828/9789241506809_eng.pdf)
19. Baryshnikova, N. V., & Pham, N. T. (2019). Natural disasters and mental health: a quantile approach. *Economics letters*, 180, 62-66.
20. Makwana, N. (2019). Disaster and its impact on mental health: A narrative review. *Journal of family medicine and primary care*, 8(10), 3090.
21. Peek L. Children and disasters: Understanding vulnerability, developing capacities, and promoting resilience—An introduction. *Children Youth and Environments*. 2008 Jan 1;18(1):1-29.
22. Ibid.
23. Cocker F, Nicholson JM, Graves N, Oldenburg B, Palmer AJ, Martin A, Scott J, Venn A, Sanderson K. Depression in working adults: comparing the costs and health outcomes of working when ill. *PLoS One*. 2014 Sep 2;9(9):e105430. doi: 10.1371/journal.pone.0105430. PMID: 25181469; PMCID: PMC4152191.
24. Lee YC, Chatterton ML, Magnus A, Mohebbi M, Le LK, Mihalopoulos C. Cost of high prevalence mental disorders: Findings from the 2007 Australian National Survey of Mental Health and Wellbeing. *Aust N Z J Psychiatry*. 2017 Dec;51(12):1198-1211. doi: 10.1177/0004867417710730. Epub 2017 Jun 1. PMID: 28565923.
25. Pharmaceutical Benefits Scheme (2022) PBS Expenditure and Prescriptions: <https://www.pbs.gov.au/info/statistics/expenditure-prescriptions/pbs-expenditure-and-prescriptions>
26. NSW Suicide Monitoring System, Report 21, Data to May 2022: <https://www.health.nsw.gov.au/mentalhealth/resources/Publications/sums-report-may-2022.pdf>
27. Mental Health Commission (2022), Community mental health and wellbeing – the ongoing impact of the pandemic, Insights from the 2021 Survey Results, May 2022: <https://www.nsw-mentalhealthcommission.com.au/sites/default/files/2022-05/Community%20Wellbeing%20during%20COVID-19%202021%20Survey%20%20Insights%20Report.pdf>
28. Health Stats NSW (2022), Mental Health Related Emergency Department Presentations – Age and Suicide and Self Harm: <https://www.healthstats.nsw.gov.au/>
29. Butterworth P, Schurer S, Trinh TA, Vera-Toscano E, Wooden M. Effect of lockdown on mental health in Australia: evidence from a natural experiment analysing a longitudinal probability sample survey. *Lancet Public Health*. 2022 May;7(5):e427-e436. doi: 10.1016/S2468-2667(22)00082-2. Epub 2022 Apr 21. PMID: 35461593; PMCID: PMC9023006.
30. Please see Appendix for explanation of approach used.
31. See Appendix for workings.
32. Johnston, D. A., Harvey, S. B., Glozier, N., Calvo, R. A., Christensen, H., & Deady, M. (2019). The relationship between depression symptoms, absenteeism and presenteeism. *Journal of affective disorders*, 256, 536-540.
33. Butterworth P, Schurer S, Trinh TA, Vera-Toscano E, Wooden M. Effect of lockdown on mental health in Australia: evidence from a natural experiment analysing a longitudinal probability sample survey. *Lancet Public Health*. 2022 May;7(5):e427-e436. doi: 10.1016/S2468-2667(22)00082-2. Epub 2022 Apr 21. PMID: 35461593; PMCID: PMC9023006.
34. See Appendix for methodology.
35. Johnston, D. A., Harvey, S. B., Glozier, N., Calvo, R. A., Christensen, H., & Deady, M. (2019). The relationship between depression symptoms, absenteeism and presenteeism. *Journal of affective disorders*, 256, 536-540.
36. See Appendix for methodology.
37. Johnston, D. A., Harvey, S. B., Glozier, N., Calvo, R. A., Christensen, H., & Deady, M. (2019). The relationship between depression symptoms, absenteeism and presenteeism. *Journal of affective disorders*, 256, 536-540.
38. Charles Sturt University 2015, Community Connections: Vulnerability and Resilience in the Blue Mountains, Project Report, Bathurst.
39. AIHW, Expenditure on Mental Health Related Services 2019-20, <https://www.aihw.gov.au/reports/mental-health-services/mental-health-services-in-australia/data>
40. Bruce J et al (2012), Evaluation of the Housing and Accommodation Support Initiative, University of New South Wales Social Policy Research Centre – Report 10/12: <https://www.unsw.edu.au/content/dam/pdfs/unsw-adobe-websites/arts-design-architecture/ada-faculty/sprc/2021-06-HASI-final-6-Sept-2012.pdf>
41. Ibid.
42. Dench McLean Carlson 2008, Final Report for Evaluation of the Prevention and Recovery Care (PARC) Services Project, Available: [www.health.vic.gov.au/mentalhealth/publications/parc-evaluation.pdf](http://www.health.vic.gov.au/mentalhealth/publications/parc-evaluation.pdf)
43. Australian Psychiatry, Promoting recovery via an integrated model of care to deliver a bed-based, mental health prevention and recovery centre, Sage Journals, October 2014 vol. 22 no. 5 481-488 Dr Stuart Lee et al., Monash Alfred Psychiatry Research Centre.
44. MHCC (2018), Mental Health Matters – Future Investment Priorities for NSW: <https://mhcc.org.au/wp-content/uploads/2018/11/MH-Matters-Future-Investment-Priorities-for-NSW.pdf>
45. Ibid.
46. Based on Productivity Commission (2020) cost per bed.



[www.impacteconomics.com.au](http://www.impacteconomics.com.au)