



Health
Professionals
Bank



NURSE LEADERSHIP DURING DISRUPTIVE EVENTS

A report by the
Australian College of Nursing
and Health Professionals Bank

2022



Australian College of Nursing

CONTENTS

Acknowledgments	02
Executive summary	03
Recommendations	05
Background and rationale	06
Demographics	08
Respondents	08
Disruptive events	11
Part 1: Impacts of 2019-21 catastrophic events on nurses	16
Staffing	16
Preparedness	16
Leadership and communication	17
Burnout	18
Blame	19
Part 2: A vision for a supported, empowered and sustainable nursing workforce	20
Nurse leadership	20
Acknowledgement	20
Workforce sustainability	21
Conditions	22
Wellbeing and development	22
Conclusion	25
References	26

Acknowledgments

The Australian College of Nursing (ACN) would like to thank the following individuals who contributed to the development of this report:

Adjunct Professor Kylie Ward FACN (Chief Executive Officer, ACN)

Dr Jacqui Hoepner (Manager of Policy and Advocacy, ACN)

Dr Carolyn Stapleton FACN (Director of Policy and Advocacy, ACN)

Dr Penelope Wilson (Policy Officer, ACN)

ACN would also like to acknowledge contributions made by the Disaster Health Community of Interest, in particular:

Professor Alison Hutton FACN – Chair

Ms Louise Lommerse MACN – Deputy Chairperson

ACN would like to thank Health Professionals Bank for sponsoring and contributing to this report.

Health Professionals Bank is a division of Teachers Mutual Bank Limited ABN 30 087 650 459 AFSL/Australian Credit Licence 238981.

Enquiries

For further information, contact: Dr Carolyn Stapleton FACN (Director of Policy & Advocacy, ACN)

T: +61 2 6283 3431 M: +61 448 017 194

E: carolyn.stapleton@acn.edu.au

ISBN (print): 978-1-922720-11-5

ISBN (electronic): 978-1-922720-12-2

Citation:

Australian College of Nursing (ACN) & Health Professionals Bank (HBP), 2022. 'Nurse leadership during disruptive events – A report by the Australian College of Nursing and Health Professionals Bank 2022', ACN, Canberra. ©ACN 2022



Executive summary

Nurses are the backbone of any disaster response. To ensure the nursing profession is empowered and supported to continue this vital work, structural reform is desperately needed.

The Australian College of Nursing (ACN) and Health Professionals Bank believe the nursing profession must be equipped to provide high-quality, person-centred and expert care, and clinical governance during times of crisis, such as natural disasters, pandemics and epidemics, collectively known as disruptive events.

This report outlines the impacts of disruptive events throughout 2019-2021 on the nursing profession and provides nurse-led solutions to ensure a sustainable, well-prepared and integrated health system in Australia ahead of future crises.

ACN presents recommendations to ensure nurses are better represented, supported and acknowledged in preparing, managing and rebuilding health care systems during disruptive events; working in ways that best reflect their expertise and qualifications; and recognised for the critical role they play not just during a disaster, but always.

Both quantitative and qualitative survey data were gathered and analysed from nurses of all ages, qualifications and levels of experience and seniority across Australia. Nurses detailed the impacts of natural disasters, the COVID-19 pandemic and

climate change on their personal and professional lives, while proposing both micro-and macro-level reforms to ensure Australia is better prepared in future.

Part 1: Impacts of 2019-2021 disruptive events on nurses explores the factors that most affected the nursing profession. These included inadequate staffing, lack of preparedness, poor leadership and communication at organisational and government levels, exhaustion and burnout from the overwhelming and relentless nature of the unfolding crises, as well as blame and abuse from the public, employers and other health care professionals.

Part 2: A vision for a supported, empowered and sustainable nursing workforce provides tangible solutions to better prepare Australia for future disruptive events. These solutions include structural reforms around workforce sustainability, improved conditions, better support systems, development for nurses, as well as greater acknowledgment of the value nurses bring. Above all, nurses call for enhanced nurse leadership and representation to ensure the nursing voice influences decision-making at all levels.

By better recognising, empowering and supporting nurses to lead before, during and after disruptive events, Australia can not only avoid the impending workforce crisis, but ensure we have a sustainable, passionate and powerful nursing profession equipped to respond to any future crisis.

‘We must ensure nurses are empowered as the next generation of great leaders, not just to manage disruptive events but to build more resilient, equitable and value-based health and aged care systems for decades to come.’

Adjunct Professor Kylie Ward FACN – ACN CEO

‘Nurses have always been an invaluable part of our communities, but the natural disasters and pandemic over the last two years have shown just how courageous nurses are in stepping up to the challenges of caring for others. Respecting the expertise and dedication of nurses requires more than words, it demands action that incorporates the nurse experience in decision-making and leadership roles.’

**Steve James, CEO, Health Professionals Bank
(a division of Teachers Mutual Bank Limited)**

Recommendations

ACN and Health Professionals Bank make the following recommendations to ensure the nursing workforce is better represented, supported and recognised to meet the challenges of future disruptive events:

1. Nurses to be present, and proportionately represented, at every place a health care decision is made, from the organisational, local, state and territory level to the highest levels of federal government. This may include:
 - Crisis prevention and mitigation meetings
 - Crisis management and response taskforces
 - Strategic workforce planning.
2. Nurses to be acknowledged as highly trained and specialised professionals that require adequate education, professional development and consultation before being redeployed to areas of need.
3. Nurses to have access to flexible funding models that allow them to work to their full capacity, experience and skills, and in line with the requirements of their professional license. This includes:
 - Access to Medicare provider numbers for all nurses, but particularly those in community and primary health care and aged care
 - Expanded Medicare Benefit Scheme items for registered nurses and nurse practitioners to enable universal health care, access and equity. This is most important for health care delivery to marginalised, disadvantaged, geographically isolated and vulnerable populations.
4. Improved conditions and entitlements for nurses including:
 - Redesigned staffing models to include recruiting to the full provision of leave entitlements including annual leave and personal leave
 - Paid leave for nurses who have experienced disruptive events such as bushfires, storm damage and floods, as well as paid leave for domestic and family violence support
 - At-risk pay commensurate with other first responders, such as police, paramedics and military
 - During disruptive events, remove all non-nursing duties from nurses to ensure safe and adequate care can be provided
 - Embed psychologically safe workplaces that respect gender equity, diversity and flexibility for nurses throughout their professional lifespan
 - A reserve workforce that optimises nurses at all levels and area of practice, from students and new graduates, to advanced practice nurses and those who have retired or taken a break willing and able to re-enter the profession.
5. Funding to be made available to ensure paid, regular clinical supervision for every nurse; and for ACN to develop and deliver tailored training for nurses in positions of leadership and management. This will allow nurses to lead the next generation of great leaders, not only in managing disruptive events but in building more resilient, equitable and value-based health and aged care systems.

Background and rationale

ACN and Health Professionals Bank recognise the disruptive events of 2019-21 detailed below have had a devastating impact on many nurses across Australia. Through various outreach initiatives ACN has undertaken throughout this period, nurses have reported countless horror stories of fear and uncertainty, violence and abuse, as well as grief, loss of hope and isolation from loved ones. However, we believe it is important to not only quantify this devastation, but to draw upon the collective wisdom and expertise of nurses across the country to provide a new, better prepared and more sustainable vision for future disruptions.

Bushfires

The 2019-20 bushfires began in New South Wales in June 2019 and by January had ravaged vast areas of that state, as well as areas of Victoria, South Australia and the Australian Capital Territory. By May 2020, every Australian state and territory had experienced numerous devastating bushfires (Daley 2020).

Thirty-four people lost their lives (Green 2020), while an estimated 16.8 million hectares of land was burned (Noble 2020), including significant national park and forest areas. The bushfires destroyed 3500 homes (Gourlay, Leslie, Mortino & Spraggon 2020) and estimates suggest total costs in property damage and economic losses ultimately exceeded \$103 billion (Daley 2020). The fires severely impacted Australia's biodiversity; an estimated nearly three billion animals were killed, including mammals, birds, reptiles and frogs (World Wildlife Fund 2020).

The nursing profession was instrumental in caring for those impacted, with many suffering devastating losses themselves (Fedele 2020).

COVID-19 pandemic

The COVID-19 virus was first recorded in Wuhan, China in December 2019 and quickly shut the city down, but not before it had spread throughout China and the neighbouring region. In March 2020, the World Health Organization (WHO) officially declared COVID-19 a global pandemic, as infections and deaths rose exponentially across the world, most notably in parts of Europe and the US (World Health Organization 2020).

In October 2020, the International Council of Nurses (ICN) confirmed 1500 nurses had died from the virus, with countless others infected as they put their lives on the line caring for their communities (International Council of Nurses 2020). The latest figures from the WHO suggest 115,500 health care workers have died from the virus (World Health Organization 2021).

In Australia, COVID-19 continued to impact almost every state and territory throughout 2021, with major outbreaks in New South Wales and Victoria, and smaller clusters across Western Australia, the Australian Capital Territory, the Northern Territory, South Australia and Queensland.

Flooding

Between 7 and 9 February 2020, severe flood warnings were issued for vast areas of New South Wales including the Sydney Basin and the Blue Mountains. The Sydney Metropolitan area ultimately received its highest rainfall in 30 years, leaving 100,000 homes without power and requiring 200 people to be rescued (Khalil 2020).

While the rain was welcome in helping to extinguish many fires still raging across the state, the floods temporarily displaced thousands of evacuees.

Drought

Before record-breaking rainfall across south-east Australia in early 2020, all areas of New South Wales and most parts of Victoria were heading towards three-consecutive years of drought. 'During that time,



farmlands were parched, lakes dried up, and millions of fish died' (Patel 2020).

The effects of drought severely impacted livelihoods, with rural and remote residents already at higher risk of suicide than their metropolitan counterparts (Australian Institute of Health and Welfare 2021).

Cyclones and storms

Between November 2019 and May 2020, north-west Australia experienced 14 tropical lows or cyclones, with category 3 Tropical Cyclone Damien causing an estimated \$5.8 million AUD damages (Moussalli 2020). In total, 28 lives were lost in the Asia-Pacific region, with Cyclone Harold devastating Papua New Guinea and the Solomon Islands.

Climate change

The WHO has declared climate change the biggest threat to human health in the 21st century (World Health Organization 2015). Australia is already

seeing the disruptive impacts of climate change – not just through a rise in bushfires, floods, droughts and storms and other increasingly frequent and more extreme weather events – but through rising temperatures, poorer air quality and impacts to fresh food and water (Better Health Channel 2019).

For instance, heatwaves are more frequent, last longer and kill more people, especially those in the most vulnerable populations, such as older people, children, Aboriginal and Torres Strait Islander peoples, those living in rural and remote areas, those with pre-existing medical conditions or disabilities and pregnant women (Barlow 2008). Meanwhile, extreme thunderstorms have caused the onset of asthma in people that have never had symptoms prior (National Asthma Council 2021).

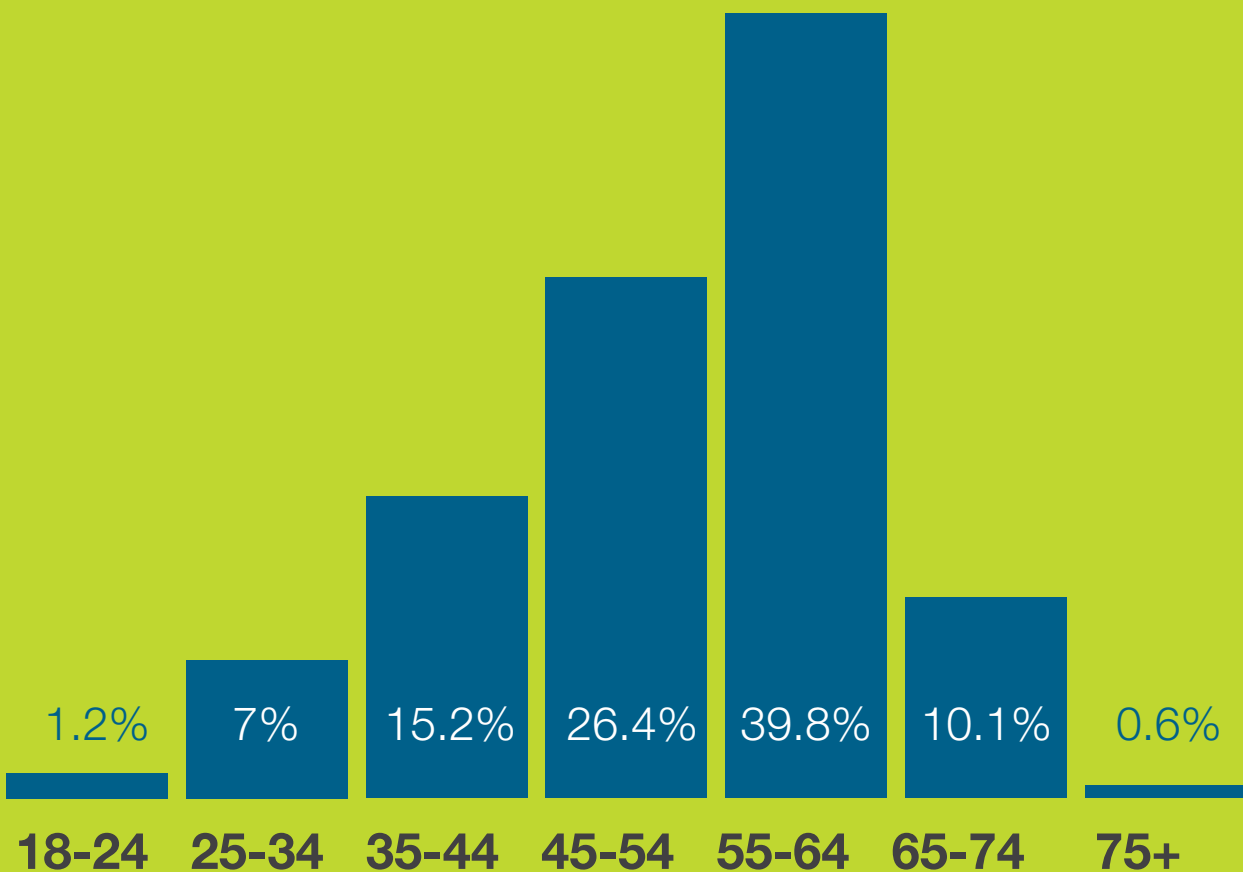
Demographics

Respondents

In total, ACN collated responses from over 1000 nurses across Australia, including a dedicated survey, focus groups and feedback through various social media platforms which have informed the final recommendations. Responses from an online survey of 314 nurses was used to inform this report, with the survey conducted throughout August 2021. These nurses spanned across age, gender, occupation, highest level of qualification and principal area of practice.

Age

Half of all survey responses came from nurses aged between 55 and 74, broadly reflecting Australia's ageing nursing workforce. According to Nursing and Midwifery Board of Australia (NMBS) 2021 Registrant Data, 45.6 per cent of nurses and midwives were above 45 years of age (Nursing and Midwifery Board of Australia 2021). The next highest age range for those who responded to the survey was nurses between 45 and 54 years. 15.2 per cent of respondents were between 35 and 44, 7 per cent between 25 and 34 and 1.2 per cent between 18-24. This means just 23.4 per cent of respondents were under 44 years of age.

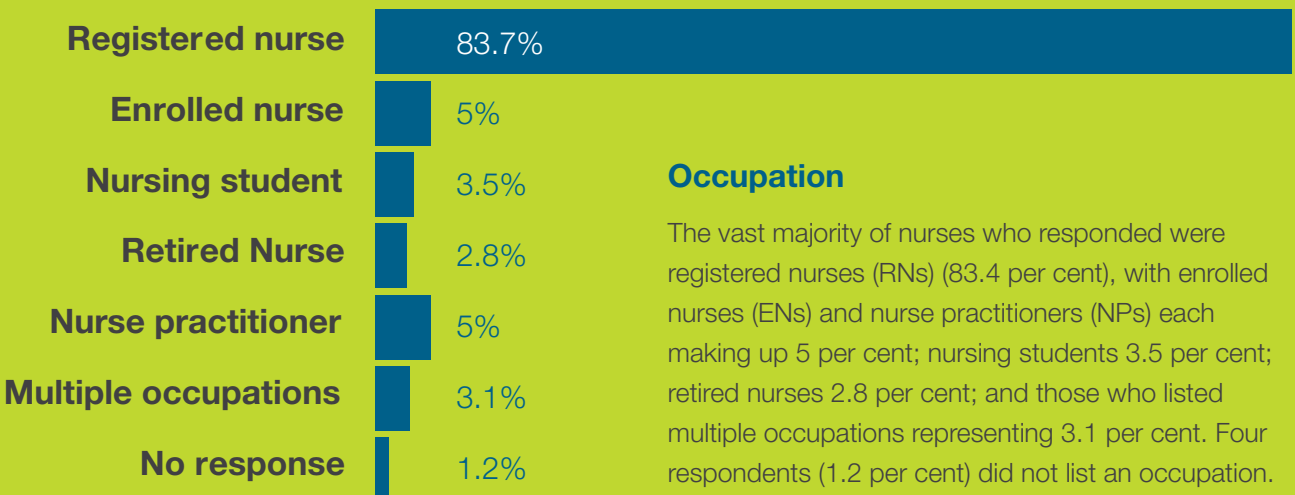


Gender

Broadly reflecting the nursing profession, 87.8 per cent of nurses who responded identified as female, 11.4 per cent identified as male, with three respondents (0.95 per cent) identifying as non-binary. According to the latest figures, nurses who are male make up just 8.8 per cent of the registered nursing workforce (Nursing and Midwifery Board of Australia 2021).

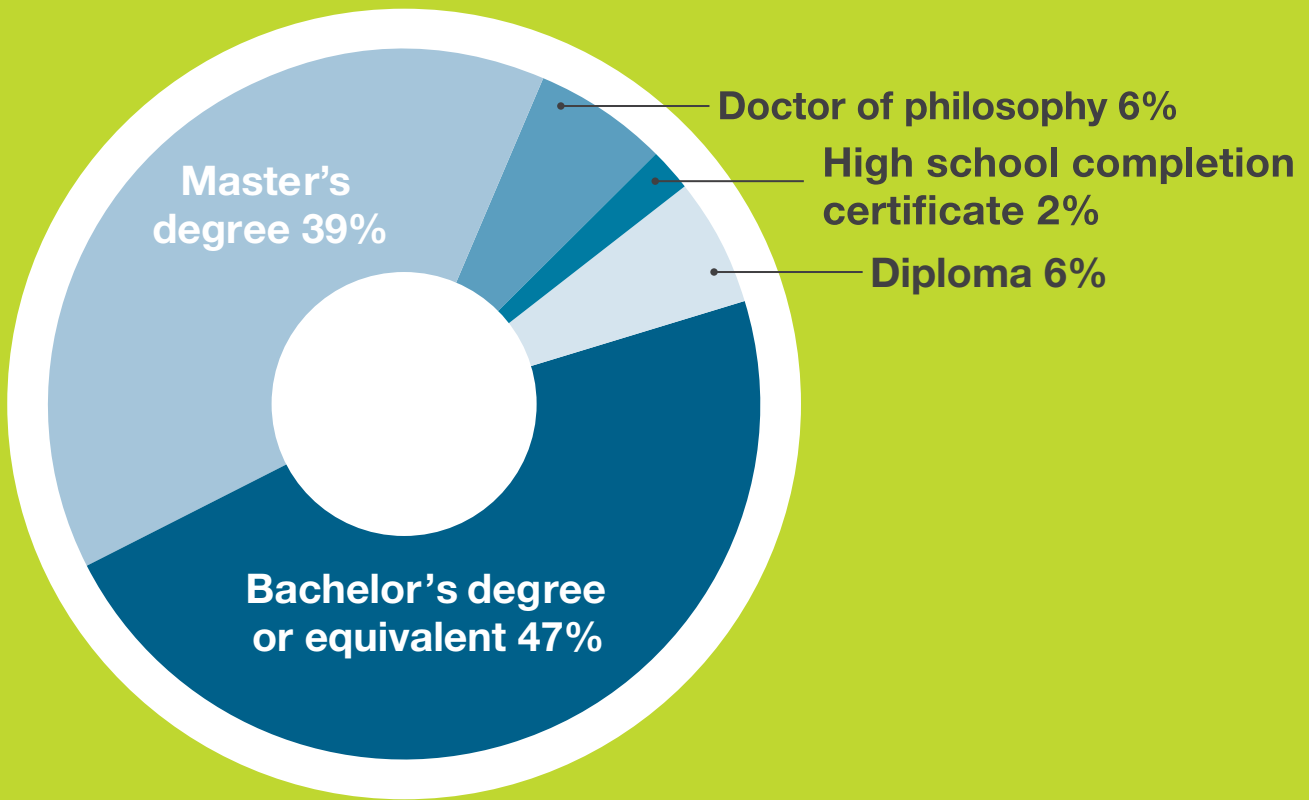


87.8% Female **11.4% Male** **0.95% Non-binary**



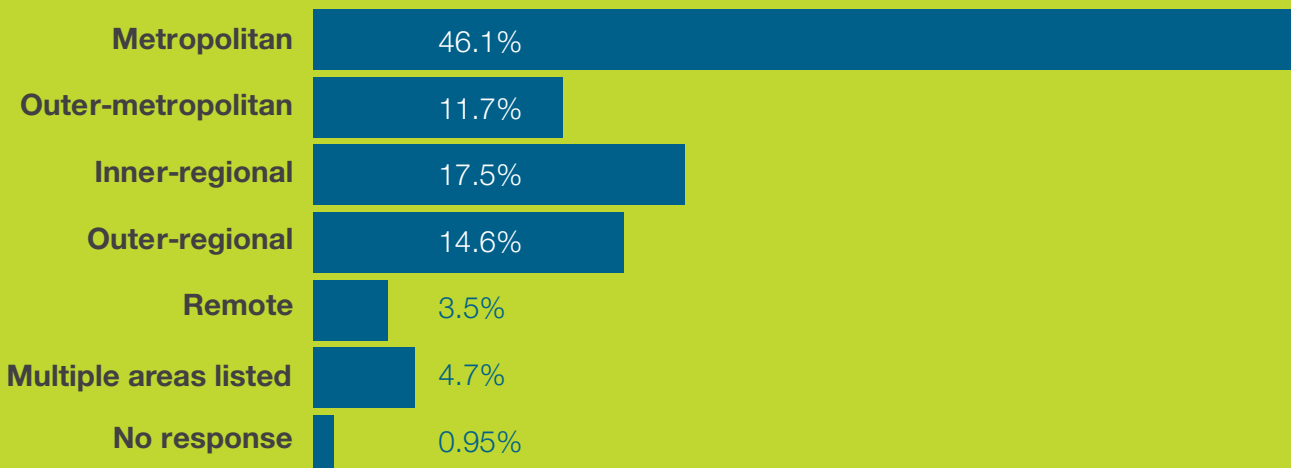
Highest level of educational attainment

Almost all nurses who responded to the survey had completed either a Bachelors Degree or equivalent hospital-based training or a Masters Degree (47 and 39 per cent respectively). Six per cent of respondents had completed a Diploma or graduated with a PhD, while 2 per cent had completed their high school certificate.



Area of practice

Once again reflecting broader population trends, most nurses who responded primarily practiced in metropolitan areas (46.1 per cent). Meanwhile, 17.5 per cent worked in inner-regional areas; 14.6 per cent in outer-regional; 11.7 per cent in outer-metropolitan; and 3.5 per cent in remote areas. Fifteen respondents (4.7 per cent) practiced in multiple regions and 0.95 per cent chose not to respond.



Disruptive events

In addition to asking respondents demographic questions, the survey also sought to quantify the impact of various disruptive events throughout 2019-21 on nurses across Australia. These multiple-choice questions included the type of disruptions experienced, the related impacts, professional and personal challenges areas nurses were most in need of support.

For the following section, respondents were asked to select 'all that apply', so the percentages listed reflect the number of total participants impacted by a particular disruptive event.

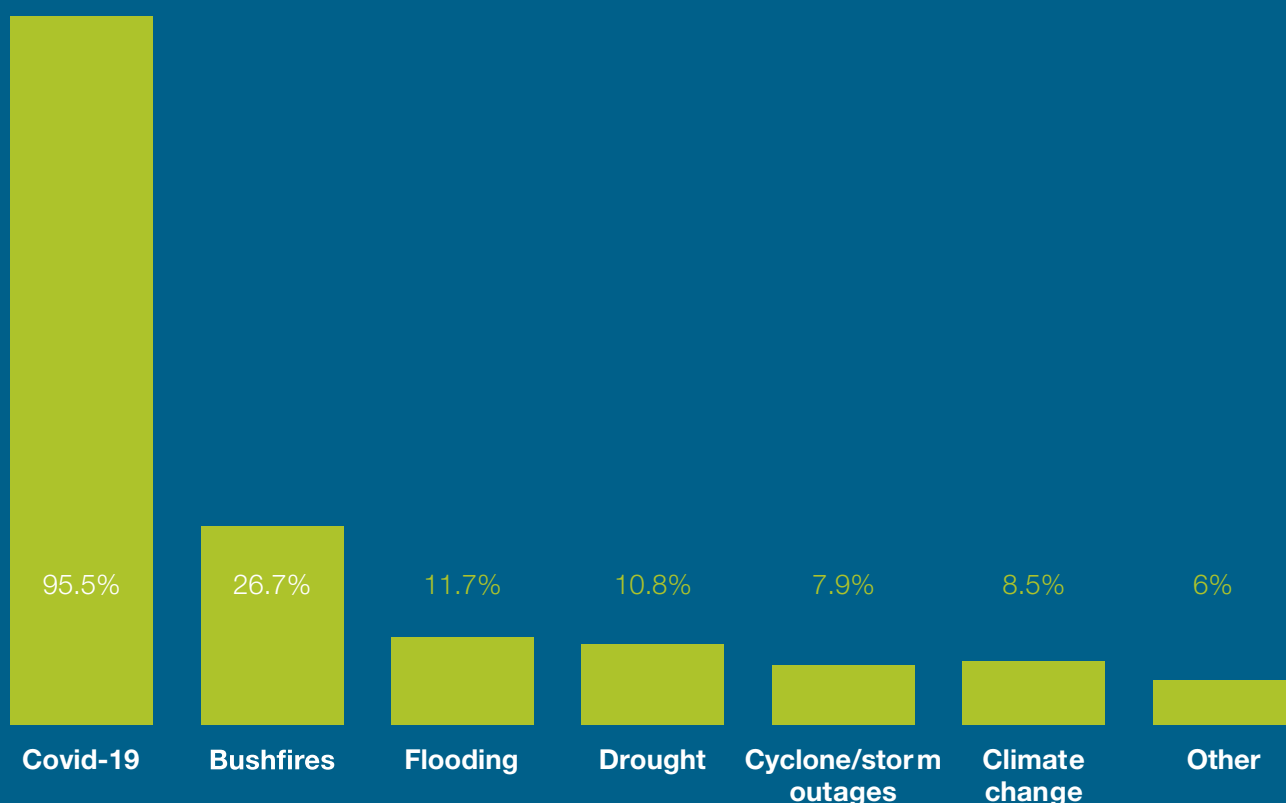


Disruptive events experienced in 2019-21

Perhaps unsurprisingly, almost all nurses who responded to the survey were impacted by the COVID-19 pandemic (95.5 per cent). The pervasive influence of COVID-19 is apparent throughout the qualitative responses from nurses, explored further in Part 1 and Part 2 of this report.

Nurses who responded were also impacted by bushfires (26.7 per cent); flooding (11.7 per cent); drought (10.8 per cent); cyclone or storm outages (7.9 per cent); climate change more broadly (8.5 per cent) and 'other' (6 per cent).

Respondents who answered 'other' listed a range of disruptions such as hailstorms, cyber-attack, retirement, deaths in family or friendship circles, diagnoses of serious illness and separation from loved ones.

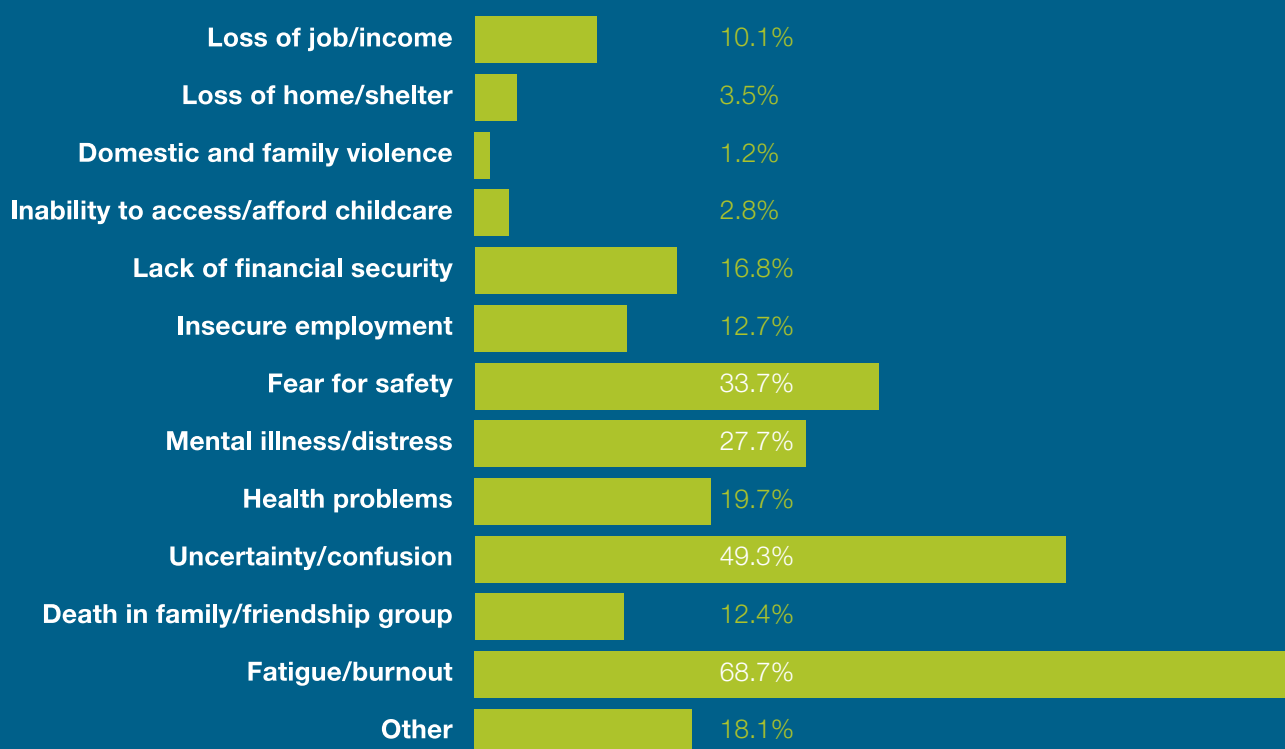


Personal impacts

In this section, respondents selected from a list of personal impacts related to disruptions experienced throughout 2019-21. Around two-thirds of all respondents were impacted by fatigue and burnout (68.7 per cent), half by uncertainty and confusion (49.3 per cent), and a third by fear for safety (33.7 per cent).

Mental illness and distress (27.7 per cent), personal health problems (19.7 per cent) and lack of financial security (16.8 per cent) were also significant. Nurses likewise reported insecure employment (12.7), death in family or friendship group (12.4 per cent) and loss of job or income (10.1 per cent). Smaller numbers also reported inability to access or afford childcare (2.8 per cent) and domestic and family violence (1.2 per cent).

Fifty-seven nurses (18.1 per cent) selected 'other' and specified further detail. These responses included workplace issues such as staffing and poor management, or interruptions to study and work. Most common however were isolation and separation from loved ones interstate or overseas, resulting in fear, anxiety and loneliness.



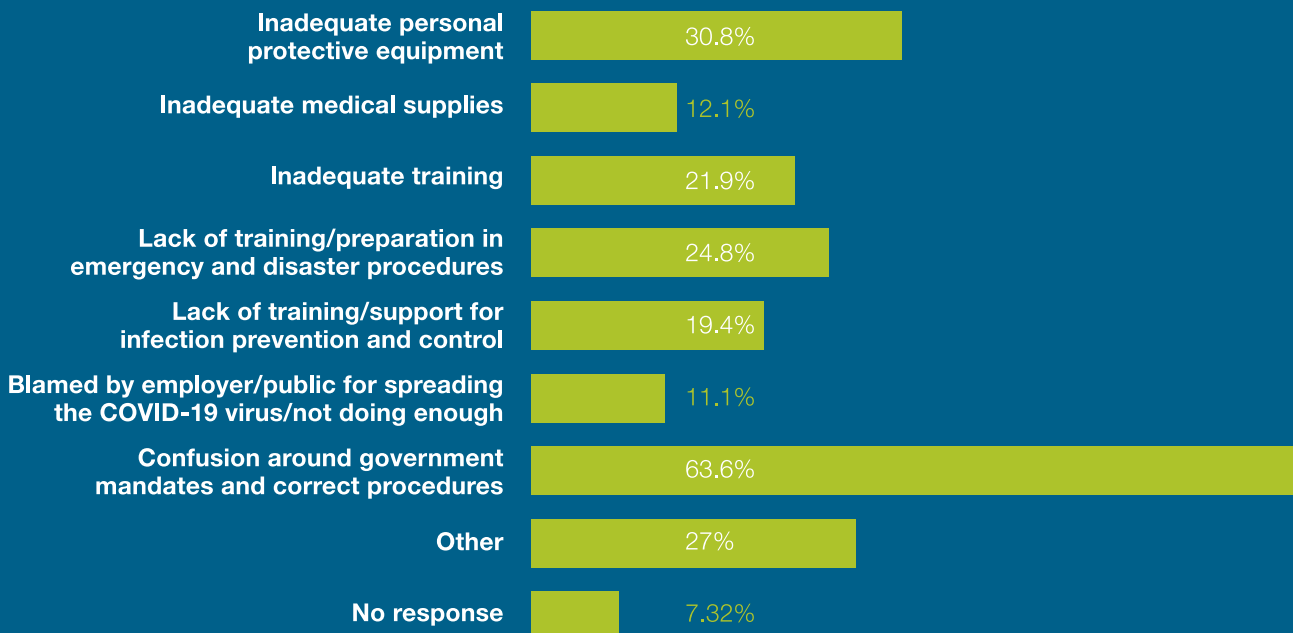
Professional challenges

In this section of the survey, respondents selected from a range of challenges they encountered professionally as a result of 2019–21 disruptive events.

Reflecting the significance of the COVID-19 pandemic on the nurses who responded, almost two-thirds of respondents were most affected by confusion around government mandates (63.6 per cent). Inadequate personal protective equipment (PPE) (30.8 per cent), lack of training or preparation in emergency response (24.8 per cent) and inadequate training more generally (21.9 per cent) also impacted nurses professionally.

Lack of training and support in infection prevention and control (IP&C) (19.4 per cent) and inadequate medical supplies (12.1 per cent) presented challenges for many nurses. Alarming, more than 11 per cent of nurses felt they were blamed by their employer or the public for not doing enough, or for spreading the COVID-19 virus. This will be explored further in Part 1 of this report.

Once again, a significant proportion of respondents (27 per cent) selected the 'other' option and specified poor leadership, management and communication, issues around staffing and overwork and lack of respect for the nursing profession.

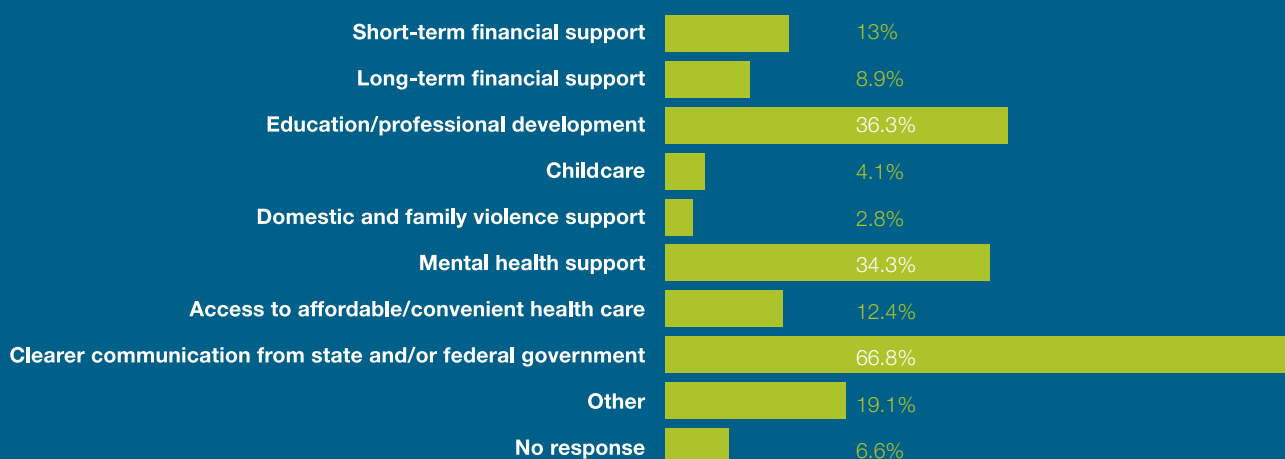


Most needed support mechanisms

In this section, nurses selected the areas in which they were most in need of support throughout 2019-21. Unsurprisingly, two-thirds of respondents wanted clearer communication from state and federal governments (66.8 per cent), while over a third wanted more funded education or continuing professional development (CPD) and greater mental health support (36.3 and 34.3 per cent respectively).

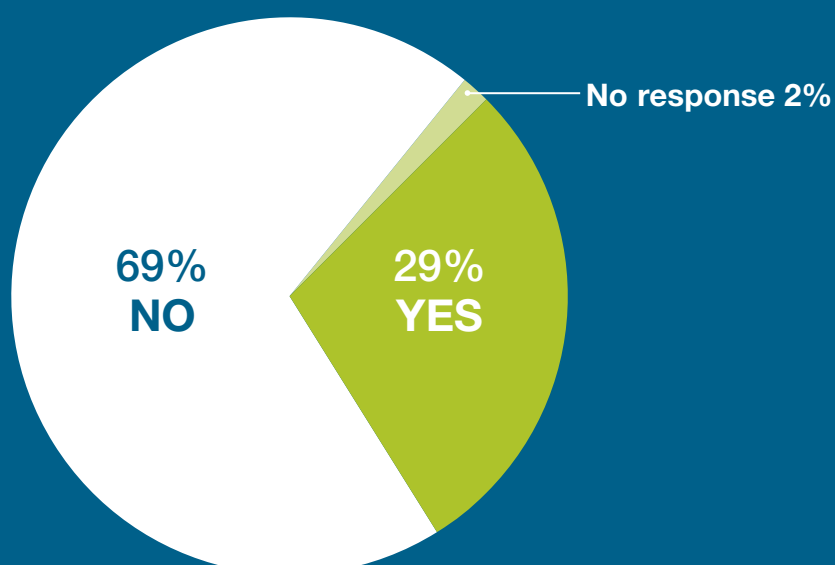
Over a fifth of nurses surveyed (21.9) wanted either short-term or long-term financial support (13 per cent and 8.9 per cent respectively) in the form of one-off payments or subsidies, or debt forgiveness and loan restructuring. Meanwhile, 12.4 per cent wanted access to affordable and convenient health care, 4.1 per cent required childcare, and 2.8 per cent needed domestic and family violence support.

Once more, a significant number of respondents (19.1 per cent) elected to provide an 'other' option. These included better staffing models and leave entitlements for nurses, exemptions for nursing students who have lost clinical placements and more support and empathy from management. Many of these issues will be discussed in more depth in Part 1 and Part 2 of this report.



Recognition for nurses

In this section of the survey, nurses were simply asked whether they believed they had received adequate recognition for their contributions throughout 2019-21. Overwhelmingly, nurses answered no (69) compared with just 29 per cent answering yes, with 2 per cent declining to answer.





Part 1: Impacts of 2019-21 disruptive events on nurses

The disruptive events of 2019-21 compounded existing problems of the health system and inadequate workforce provision and posed new challenges for the nursing profession. This section explores the factors that increased pressure on nurses and left them feeling overwhelmed and let down.

Staffing

Nurses who responded to the survey reported severe understaffing in some areas, which meant many were forced to work unpaid overtime, work multiple double shifts per week or cancel their leave.

'Forced overtime, denied annual [leave], denied increase of one day a week even though worked 4 days a week contracted part time permanent 2 days a week. However, hired more staff. Leave: have only had 10 days off in 2 years.'

'We were unable to take any leave for 12 months, very short staffed and overworked, unable to access health services except the clinic, unable to see family, unable to leave the community (to go camping or take any kind of break).'

Particularly in COVID-19 hotspots, the nursing workforce was stretched increasingly thin across testing, tracing and intensive care, leaving 'non-frontline' or 'business as usual' (BAU) work to pile up.

'There seems to be a chronic shortage of nurses. And nurses who would have normally applied for positions we need them in, instead applied for COVID-19 related positions which had higher rates of pay. Me and my team are exhausted. Additional overtime, time away from family, relationship breakdowns.'

'We were stretched to the limit with staffing. Nurses were redeployed to run the health hotels, hotlines,

swabbing for Sydney and our concerns for skeleton staffing in the hospitals were ignored.'

Those few nurses not working in 'frontline' roles, particularly in nursing education, primary and community care or aged care ultimately took on the work of several nurses.

'All nurses in team redeployed, leaving continued service provision to me.'

Even before the COVID-19 pandemic, Australia's nursing workforce was facing an impending shortage, as well as maldistribution across the acute, primary and community and aged care sectors. However, with nurses redeployed to manage the pandemic, these gaps in the system have become even wider, with some nurses losing their passion for nursing altogether.

'In my 20+ years of nursing I have always loved my profession. After two years of this with no leave, unclear directives, staff shortages, long hours – I don't enjoy my work anymore.'

Preparedness

Nurses were disappointed by the lack of preparation in dealing with the disruptive events of 2019-21, both in terms of equipment such as PPE, as well as a lack of a clear strategy and mitigation plan. A recent study found lack of preparation for the COVID-19 pandemic contributed to low morale associated with workplace difficulties to provide care, burnout and other emotional issues' (Pérez-Raya, Cobos-Serrano, Ayuso-Murillo, Fernández-Fernández, Rodríguez-Gómez & Almeida Souza 2021)

Personal protective equipment (PPE)

Nurses working in primary and community care reported inadequate supply and provision of PPE, including arbitrary fit-testing and the practicalities of working in a non-acute care setting. Research suggests inadequate supply and training in the correct use of PPE can further compound nurses' anxiety and distress when used in surge workforces during an epidemic (Holroyd & McNaught 2008).

'If we are to be 'fit tested' for masks then we need to have the appropriate mask available otherwise don't waste everyone's time and just tick boxing to say it's done and then there's only 1 type of mask available. I also don't like having to beg for a mask supply each day, because if I only get masks for the number of booked visits but have an urgent review needed then I have to drive back to the office (20-30/60 each way) to get another mask.'

Those working in acute care reported poor understanding of supply issues and protocols in their workplaces.

'The hospital I worked at thought they had N95 masks but weren't sure. The infection control team didn't know that the masks needed a fit check. They had no protocols and were unaware or unwilling to work towards getting appropriate PPE supplies or education.'

Strategy

Nurses reported being surprised by the lack of a clear plan or application of lessons learnt overseas, where the COVID-19 pandemic had already taken hold. This is particularly troubling considering evidence-based, Australian frameworks to prepare the health care system for pandemics have been available for at least 10 years (Patrick, Shaban & FitzGerald 2011). While COVID-19 differed markedly from previous pandemics in terms of transmissibility and reproduction rate, and the relevance of these plans were not guaranteed, key steps could have been taken particularly around domestic supply chains and stockpiling of PPE and medical equipment.

'Why was there not a plan in place? There are disaster plans, why not pandemic? This started in late 2019 and Europe and Asia were live examples of what was coming. I am gobsmacked that a country like Australia was not prepared. Even now the vaccination rules keep changing.'

Likewise, nurses noted the inability to learn from other epidemics, such as the annual influenza season.

'The current pandemic handbook needs a major revision before the next pandemic/ epidemic occurs. There should have been adequate PPE from day one. Influenza occurs every year and hits the health system hard. Many of COVID-19's lessons could be

applied to the annual influenza season as I feel my clinical service has been left exposed in previous years.'

Still others noted the disproportionate impact felt in regional and remote areas.

'I think remote Australia was just so under prepared and this created a lot of the stress and difficulty. After a few months though, being aware of the stress levels and circumstances, the employers and government should have reviewed the situation and taken better care of remote health workers. There was no sense of this.'

This corresponds with studies suggesting nurses working in rural areas face distinct pressures during disaster response, due to isolation, lack of staffing and resources and an absence of education and training programs tailored for this setting (Kulig, Edge & Smolinski 2014; Kulig, Penz, Karunanayake, MacLeod, Jahner & Andrews 2017; Willson, Fitzgerald & Lim 2021).

Leadership and communication

With half (49.3) of all nurses surveyed feeling uncertainty and confusion, two-thirds reporting misunderstanding around government mandates, and the need for clearer communication from state and federal governments (63.6 and 66.8 respectively), it is clear leadership and communication was sorely lacking. In their qualitative responses, it was apparent the ability for nurses to be resilient amid the chaos and uncertainty of 2019-21 was heavily influenced by their leaders and managers, at both organisational and government levels. Poor direction and messaging meant many nurses felt abandoned by the systems meant to support them.

Micro-level

Many nurses reported their employer let them down through poor leadership and inadequate communication. This supports recent findings suggesting inconsistent messaging and unclear directives from management compounded feelings of uncertainty and lack of support among Australian health workers, including nurses (Li, Sotomayor-Castillo, Nahidi, Kuznetsov, Considine, Curtis, Fry, Morgan, Walker, Burgess, Carver, Doyle, Tran, Varshney & Shaban 2021).

‘Management and leaders were aware of the increase in workload and increase in burnout, but no strategies were implemented. Failure to acknowledge and act is the biggest concern.’

There was also concern that some senior leadership or executives were disconnected from the realities of care provision during a disaster and therefore ill-prepared to respond appropriately to evolving crises. This corresponds with a 2018 study which concluded executives should not be involved in disaster response if they have not had appropriate training (Tavares 2018).

‘Poor decisions affected patient care. Some things could easily be avoided but the executive does not accept they do not know what occurs at ward level.’

‘There was very much a lack of physical presence (and this persists) and any understanding from our leaders as to the challenges with managing this environment day to day. When issues are brought up you feel like you are being a nuisance.’

Poor communication at the organisational level often caused confusion and uncertainty.

‘Clearer communication from government but even more so from hospital executives. There was no unifying message and directive from the chief executive of hospitals so different hospitals were practicing different things and even within a single hospital, different departments were left to make up their own rules on what is deemed safe and BAU (business as usual).’

Others were concerned with unclear escalation protocols or channels of communication when issues became untenable.

‘Clear pathways of communication to incident management team so if you get a middle manager who is not able [to] escalate issues then we at the coal face have access to a leader who can discuss solutions. There may be limited solutions but if a team is drowning in workload and this is acknowledged and can’t be addressed, don’t let them drown, at least talk to them and keep them afloat.’

Macro-level

Some nurses felt a distinct lack of government foresight and initiative left the health system scrambling.

‘Government is far too reactive. Being proactive and anticipating these challenges in the future will ensure the health system is much better placed to support the community and deliver needed health services quickly and efficiently.’

More broadly, nurses reported feeling confused, disappointed and angry at the inability for state and federal governments to steer the community through various crises throughout 2019-21.

‘Complete lack of leadership from federal government has led to mixed messages, slow vaccine rollout, lack of cohesion and cooperation between states and no new quarantine facilities built.’

In particular, some nurses were frustrated with the lack of a clear or cohesive strategy between state and federal governments.

‘State and federal governments need to be on the same page and think about what they tell the media and what they want the people to do! We all need to be doing the same thing in all states and territories!’

Some nurses surveyed believed a national, rather than state-based response to the COVID-19 pandemic would have provided much needed clarity and consistency across Australia.

‘COVID or any other pandemic situation should have been federal response and not state by state responses. This would have ensured central governance and avoided states that do not respond well due to their decisions, then blaming other states or the federal government.’

‘There needs to be clearer and coordinated communication and directives from federal, state and territories. At times it has felt like The Hunger Games with every one of them out for themselves. Rather than a national and coordinated response.’

Burnout

As described in the *Demographics – Disruptive events* section, more than two-thirds of nurses surveyed suffered fatigue or burnout. This

corresponds with recent studies suggesting that during the COVID-19 pandemic, nurses experience a range of distinct physical, emotional, professional and social stressors that compound feelings of exhaustion and fatigue (Ness, Saylor, Di Fusco & Evans 2021; Shigemura, Ursano, Kurosawa, Morganstein & Benedeck 2021). It is clear the relentless nature of 2019-21 disruptive events left many nurses feeling overwhelmed, exhausted and unable to cope.

'There has been little time between drought, bushfire and the arrival of COVID-19. This close proximity has not allowed the body to heal and restore resilience.'

With these crises coming back-to-back, many nurses were unable to take leave or seek respite, further compounding their immense sense of fatigue and despair. Research suggests nurses are extremely adaptable, able to balance personal loss and disruption and caring for others (Sato, Atogami, Nakamura & Yoshizawa 2016), though this resilience has its limit.

'The bushfires quickly followed by COVID have seen us in our workplace have little opportunity for leave or any down time. We have also had staff resignations resulting in long waiting times for patients. I have no real idea on how to be better prepared or supported. I just want a decent break and I know everybody in the country is the same.'

With the rest of the country in lockdown, nurses felt their usual strategies for coping and blowing off steam were no longer available, on top of their unsustainable 'frontline' workloads.

'Some people forget that nurses have never had a lockdown, so whilst the majority of the public have had mandated time at home, we kept going to work, often doing extra hours or shifts, to help keep everything afloat. Unsurprisingly, we're tired, yet still it continues, with no chance of a break for us, and our usual coping strategies, e.g. drinks or a night out, no longer an option. Something has to give, especially now that we're starting to get slammed again.'

Some nurses felt the phrase 'burnout' was inadequate to describe the way they were feeling.

'We are beyond burnt out. I am fried to a crisp, totally shattered. I am so exhausted. I am so angry

at being told I need to be resilient. We support our community but who supports us?'

Recent studies suggest nurses are able to effectively compartmentalise the devastation they are seeing in order to continue working in the moment, but later reflect on the experience as traumatising (Hammad, Arbon, Gebbie & Hutton 2017; Jabbour, Harakeh, Dakessian Sailan, Nassar, Tashjian, Massouh, Massouh, Puzantian & Darwish 2021). With multiple disruptive events overlapping, many nurses were not able to take this time to reflect, and instead the despair and exhaustion were compounded over time.

Blame

Further compounding some in the nursing profession's sense of despair and isolation was the blame and abuse levelled at them by patients, their employers, their colleagues and the broader public. As described in the Demographics – Disruptive events section, 11.1 per cent of nurses felt they were blamed for not doing enough, or for spreading the COVID-19 virus. This corresponds with recent studies suggesting nurses were subject to violence and malicious stigmatisation campaigns by the public globally (Chamboredon, Roman & Colson 2020).

Some nurses felt they were targeted because of their visibility as frontline workers.

'I was horrified when I heard a nurse had been spat on while exercising because someone recognised her as a nurse and thought she should be at home.'

'We were threatened and not supported by senior management: they didn't send a message to our community not to verbally abuse us!'

This visibility meant they also bore the brunt of patient and family anger around visitor restrictions and other COVID-19 protocols.

'COVID 19-visitor restrictions [has] been the hardest for patients, families and staff – aggression towards staff has increased.'

Aged care nurses, in particular, felt the burden with the Victorian COVID-19 outbreak hitting residential aged care facilities.

'Stop criticising aged care, staff feel like criminals.'

'Criticism has been toxic and not supportive of nursing staff who are fatigued, poorly paid and most at risk.'

Part 2: A vision for a supported, empowered and sustainable nursing workforce

With the challenges outlined in Part 1 of this report, it was important to draw upon the collective wisdom of Australian nurses to provide a vision for a proactive, prepared and fit-for-purpose nursing workforce, well-equipped to handle any future disruptions.

Nurse leadership

Many nurses surveyed believed nurses could – and should – play a much greater role in decision-making at all levels. The professional expertise and insight nurses bring could be much better utilised in every aspect of disaster planning, response and communication. A recent study found nurses were critical in developing and implementing frameworks to manage responses to Cyclone Harold and COVID-19 in the Asia-Pacific region (Bornstein, Elton, Kennedy, Sosefo, Daniel, Sanau, Nason & Mitchell 2021).

‘Nursing needs to be recognised as a professional science, as an intellectual profession, as a critically thinking profession – not handholding, numbers on the ground solution. Nursing needs to be given opportunities to contribute to the community with their skillsets e.g. vaccine roll out, public health messaging, a voice to government.’

‘Listen to nurse leaders. We are oftentimes the ones putting things together from the ground up. We write policies, operating procedures, provide structure and training and provide direction.’

Throughout the crises of 2019-21, many nurses felt sidelined in favour of doctors and Chief Medical Officers, leaving the largest and most trusted health profession underrepresented.

‘Most of the media experts were medical professionals including Chief Medical, public health,

epidemiologists etc but there was no voice of IP&C (Infection Prevention and Control) experts (nurses) who are able to drive the control and prevention strategies and impacts.’

‘I would like to hear more from nursing leaders in the media. Nurses are the most trusted profession – we should use this to advance public health messages and the profession.’

This supports a study which found nurses can play a critical role in all aspects of disaster response, including communications, leading multidisciplinary teams, addressing long-term health issues in the community and policy planning, before during and following times of crisis (Kulig, Edge, & Smolenski 2014).

Those surveyed also believed specialist nurses should be driving particular areas of the strategic and operational response, including respiratory nursing and infection prevention and control.

‘COVID has highlighted the need for greater recognition of respiratory nursing as a nursing specialty and indeed the patients we manage. We require standards for managing high acuity respiratory patients, ratio, monitoring, minimum equipment, skills and knowledge to use complex respiratory systems such as ventilation etc.’

‘Nurses [must be] the voice of infection prevention and control.’

Enhanced nursing leadership would not only provide expert, trusted and highly experienced insights to better prepare for, manage and evaluate disaster response, but would demonstrate and acknowledge the value of nursing more broadly. Nurses’ ability to adapt to hardship, provide leadership and use critical thinking in a crisis has been demonstrated in various studies (Johal & Mounsey 2015; Klein & Nagel 2007; Scrymgeour, Smith, Maxwell & Paton 2020).

Acknowledgement

While it would not address all of the challenges identified, many of the nurses surveyed believed greater recognition and acknowledgement of their

contributions and sacrifice would have gone a long way in sustaining their passion and commitment to nursing.

'Our employers need to value us. As most people in our remote communities left workplaces, it was the registered nurse/ remote area nurses who stayed.'

'Acknowledgement from managers and employers that we keep going and caring when other professions don't.'

'[It would help] if nurses were thanked and communicated with throughout and given help to endure and build resilience.'

There was also a need for nurses to be recognised as human beings, with families and other commitments. The sacrifices and compromises nurses made to contribute meaningfully cannot be taken for granted in future.

'I think taking time to realise that nurses have families and responsibilities outside of work too. A lot of us are mums, providing care and support for family members. Just taking time to realise that each nurse is a human being, not just employees that can be treated like robots – overworked, interchangeable, with minimal breaks.'

Nurses, and NPs in particular also spoke about the importance of tangible recognition, through enhanced support to undertake their critical role. This reflects an Australian study following the Black Saturday bushfires in Victoria, which found NPs are not effectively utilised in emergencies because of poor understanding of their role and value, as well as practical constraints on their scope (Martin 2009).

'Empower nurses to use their full scope of practice and skill set.'

'Provide NPs with appropriate remuneration for their work through the Medicare Benefits Scheme (MBS).'

'[Expansion of] the Medicare item numbers that would allow NPs to work in the community.'

A 2020 study found greater utilisation of NPs globally will enable 'better health, greater gender equality and stronger economies – but also help the world to realise high-quality, cost-effective universal health coverage' (Rosa, Fitzgerald, Davis, Farley, Khanyola, Kwong, Moreland, Rogers, Sibanda & Turale 2020).

Nurses also believed they could be much more effectively employed in vaccination rollout strategies.

'Putting nurses in charge, after all nurses have been doing immunisation for years, we don't need a whole lot of red tape to get the job done.'

'Being asked to assist with the vaccination.'

With better recognition and acknowledgement of the value nurses bring and the sacrifices they make, nurses may be more willing to not only remain in the profession longer, but also train and prepare more nurses, and step back into the workforce if needed.

Workforce sustainability

Many nurses surveyed believed greater attention needed to be paid to ensuring the sustainability and appropriate distribution of the nursing workforce, particularly in times of crisis. This would allow nurses to be utilised most effectively, while reducing unnecessary strain and burnout.

One of the key strategies nurses proposed was to implement a 'reserve' workforce, made up of retired nurses, and those who had otherwise left the profession.

'The basics of nursing is a skill set that is not forgotten even after decades. Retired nurses can be reactivated to provide support during disruptive events, such as working at pop up vaccination centers or evacuation points. There should be a system where non-practicing and retired nurses can be activated under license to lift a significant burden from currently registered and enrolled nurses. This would allow for the rapid escalation of nursing capacity. If necessary, a day or two refresher training could be done. It will take a mind shift by regulators to make it happen. But it needs to happen, or we will lose nurses to burnout or mental health issues.'

'A standby nursing workforce made up of retired nurses who maintain currency could be used for initial flying squads to assist rural hospitals/ community organisations to manage acute mental health and medical issues, including care for the aged or infirm who may need evacuating. There could be an annual update course online or face to face.'

This reserve workforce could also assist during natural disasters such as bushfires, flooding and cyclones.

'Have backup of staff to relocate to the affected region to assist while local staff sort out the damage to their own properties and arrange insurance claims etc.'

Nurses also highlighted the need to support all staff within the health care system, not just those in clinical roles, in order to keep the system functioning as effectively as possible.

'There needs to be a focus on the supporting services that are not directly 'frontline' – cleaners are vital, so are quality managers and risk/policy nurses and education teams. These workforces are pushed and pulled and placed into roles that they are no longer confident in (we had managers who refuse to complete medication training, stating they are out of scope, drawing up vaccinations and the like). All organisational time and attention once the risk lowered has been diverted to COVID vaccination and swabbing – at the expense of 'standard' core business.'

Nurses in community and primary health care (C&PHC) believed a shift needed to occur to ensure the sustainability of the primary health system, instead of prioritising acute care.

'We are on the forefront of this pandemic. Every single day. How are we ever to recruit new nurses to this area of practice, when we can't compete with hospital-based nurses. Nurses in this field are specialists in their own right.'

Implementing staff retention strategies, shoring up a reserve health workforce and supporting all components of the health care system will ensure a more sustainable nursing workforce for future disruptive events.

Conditions

Overwhelmingly, the nurses surveyed believed it was necessary to drastically improve nurses' working conditions in order to build resilience and guarantee a nursing workforce equipped to meet the challenges of future crises.

Many of those surveyed suggested providing nurses with hazard pay, as workers in similarly dangerous or exposed professions receive.

'Some kind of financial bonus would be reasonable given the circumstances we were required to work in and live in for that extended period of time.'

'Nurses should be paid like police and paramedics... We should get a paid sleep day after night duty. We should get a paid sleep day after a double shift. Most importantly we should not be paying extra tax on overtime etc. We should have got a tax break not a penalty for the immense risk we took and the ridiculous hours of overtime we worked.'

'Receiving more thanks from the government or employers, especially some form of hazard pay while we were risking our lives and our families' safety.'

Nurses believed more leave – or at least honouring existing leave entitlements – would provide the respite and break nurses so desperately needed to maintain their commitment.

'Additional personal leave, for COVID or during emergencies such as bushfires to manage stress, and to recognise caring roles, for example looking after elderly parents, grandchildren or assisting with home schooling when schools are closed. Once your 10 days personal leave is used then you have the added stress of taking non-paid leave.'

'Provide paid leave post major incident for staff to do required claims and clearing rather than have to use own annual leave.'

'Financial concerns as if we're isolating, we use up sick leave and annual leave, then none left for a break away when restrictions lift.'

It is clear that for the nursing profession to truly feel valued, appreciated and adequately recognised for their contributions – particularly during disruptive events – structural reforms around staffing, pay and leave entitlements must be implemented.

Wellbeing and development

Many nurses surveyed believed it was essential for employers, government and the public to understand and appreciate the mental health impact of frontline disaster response.

'As health professionals we have to not only deal with our own emotional responses to disasters but also provide care physically and psychologically for the teams that we lead and the affected communities that we serve. [We need] those who lead and within positions of power to be



non judgemental and non-critical, to provide an avenue for people to talk about elements critical to being psychologically prepared for and with the ability to respond to disasters.'

'Understanding of how traumatic this period was, offer of debriefing by members of executive team so there is a feeling of security that more understanding would be available in another such event.'

Nurses argued a cultural shift in the expectations placed on nurses is necessary to ensure their sacrifices are not taken for granted in future.

'Mental health of essential workers needs to be a priority as there is this expectation from the society that we are some superheroes with no feelings at the time of disaster. It's okay for us to say, 'I'm not okay'.'

Tangible support mechanisms would also significantly bolster the nursing profession and their ability to keep caring at the highest standard.

'Ensuring that all nurses and midwives have access to wellbeing support including clinical supervision.'

'Free psychology sessions to deal with the life events. These need to be face-to-face sessions'

'Care packages for staff experiencing extenuating circumstances and special leave. Mental health support during crisis.'

Nurses also reported a need for enhanced CPD, including dedicated funding and leave to undertake

preparedness training. Research suggests consistent, accessible and nurse-led disaster education in Australia would better equip and empower nurses to face a disaster (Ranse & Lenson 2012; Rokkas, Cornell & Steenkamp 2014).

'Need to ensure all health workers are well educated and well prepared.'

'More training for people who haven't ever COVID swabbed (including ENs).'

'Adequate training for IP&C and PPE for all nurses and midwives – including consultation services.'

'Training around emergency response/ disasters.'

A recent study found dedicated undergraduate disaster training ensures effective care for affected people while ensuring 'the health and safety of health professionals and other responders', while also helping nurses feel less overwhelmed and underprepared. This study suggested disaster nursing competencies should include: triage in a disaster in order to do the greatest good for the greatest number of people; critical thinking in a disaster; teamwork; technical skills around PPE, infection protocols, advanced first aid; legal and ethical parameters within which nurses need to work and; the socio-cultural context to help with disaster relief in other countries (Ituma, Ranse, Bail & Hutton 2021).



Conclusion

This report has outlined the devastating impacts and challenges of 2019-21 disruptive events on the nursing profession, while also drawing upon the wisdom and experience of Australia's nurses to offer a bold vision to ensure a committed and empowered workforce.

It is clear that for the country's nurses, the COVID-19 pandemic and bushfires posed the greatest challenges. The relentless and overwhelming nature of these disasters was compounded by overwork, understaffing, blame, lack of preparation and poor leadership and communication at both organisational and government levels. The testimony from Australia's nurses painted a bleak picture; where nurses are burnt out, stretched to their limits and losing their passion for the profession.

As evidenced by this survey, the nursing workforce is ageing with many nearing retirement, meanwhile graduate nurses receive poor support and a dearth of career pathways. Further compounded by disruption, they are forced to work overtime, often unpaid, doing the work of three, four, five or even ten nurses. They pick up the slack for their colleagues but cannot keep doing this forever. They desperately need a break but are instead forced to cancel their leave and miss out on precious time with their loved ones.

These insights echo the warnings of ACN and many other nursing organisations: we are facing an impending and entirely untenable workforce crisis. Without drastic reform, we will not be able to sustain a nursing profession that is adequately supported, equipped or empowered to keep going, let alone to tackle future crises.

The picture does not need to be so bleak. Australia's nurses proposed practical, systemic reforms to better support the nursing profession in managing looming disruptive events. Enhanced nursing leadership at all levels of planning, preparation, decision-making, communication and evaluation will ensure the nursing voice can influence a more effective and evidence-based response next time. Greater acknowledgement of the value nurses bring and the sacrifices they make in serving their communities will strengthen nurses' commitment and resolve in tackling future crises. Structural reforms that prioritise the sustainability of the nursing workforce through improved conditions and entitlements, as well as better workforce planning and distribution will shore up the nursing workforce, equipping it to respond and adapt quickly and efficiently in times of emergency. Prioritising wellbeing and development will provide support systems for nurses where they know they are adequately prepared, trained, listened to and provided for in times of need.

By investing in significant structural reforms to the way the nursing profession is represented, supported and recognised, Australia can not only avoid the impending workforce crisis, but ensure we have a sustainable, passionate and powerful nursing profession equipped to respond to any future disaster.

References

- Australian Institute for Health and Welfare, 2021. 'Deaths by suicide by remoteness areas'. Suicide and self-harm monitoring. <https://www.aihw.gov.au/suicide-self-harm-monitoring/data/geography/suicide-by-remoteness-areas>
- Barlow, G., 2008. 'Nurses feel impact of climate change', *The Australian Nursing Journal*, 15(10), 24-6.
- Better Health Channel, 2019. 'Climate change and health'. <https://www.betterhealth.vic.gov.au/health/healthyliving/climate-change-and-health>.
- Bornstein, S.L., Elton, L.G., Kennedy, F., Sosefo, M., Daniel, P., Sanau, E., Nason, R., & Mitchell, R.D., 2021. 'Rising to the challenge: The emergency nursing response to COVID-19 in the Pacific', *Australasian Emergency Care*, 24(1), 1-3.
- Chamboredon, P., Roman, C. & Colson, S., 2020. 'COVID-19 pandemic in France: health emergency experiences from the field', *International nursing review*, 67(3), 263-333.
- Daley, B., 2020. 'With costs approaching \$100 billion, the fires are Australia's costliest disaster', *The Conversation*, 17 January 2020.
- Fedele, R., 2020. 'In the line of fire: Responding to Australia's bushfire crisis', *Australian Nursing and Midwifery Journal*. 34-5.
- Gourlay, C., Leslie, T., Martino, M., & Spraggon, B., 2020. 'How heat and drought turned Australia into a tinderbox', *ABC News*.
- Green, M., 2020. 'Australia's massive fires could become routine, climate scientists warn', *Reuters*, 14 January 2020.
- Hammad, K.S., Arbon, P., Gebbie, K. & Hutton, A., 2017. 'Moments of disaster response in the emergency department (ED)', *Australasian Emergency Nursing Journal*, 20(4), 181-5.
- Holroyd, E., & McNaught, C., 2008. 'The SARS crisis: reflections of Hong Kong nurses', *International nursing review*, 55(1), 27-33.
- International Council of Nurses, 2020. 'ICN confirms 1,500 nurses have died from COVID-19 in 44 countries and estimates that healthcare worker COVID-19 fatalities worldwide could be more than 20,000', 28 October 2020.
- Ituma, O.W.N., Ranse, J., Bail, K. & Hutton, A., 2021. 'Disaster education for Australian nursing students: An integrative review of published literature to inform curricula', *Collegian*, [In press, corrected proof].
- Jabbour, R., Harakeh, M., Dakessian Sailan, S., Nassar, V., Tashjian, H., Massouh, J., Massouh, A., Puzantian, H., & Darwish, H., 2021. 'Nurses' stories from Beirut: The 2020 explosive disaster on top of a pandemic and economic crises', *International nursing review*, 68(1), 1-8.
- Johal, S.S. & Mounsey, Z.R., 2015. 'Finding positives after disaster: Insights from nurses following the 2010-2011 Canterbury, NZ earthquake sequence', *Australasian Emergency Nursing Journal*, 18(4), 174-81.
- Khalil, S., 2020. Analysis: 'Huge reprieve' for firefighters. *BBC News*. 10 February 2020.
- Klein, K.R. & Nagel, N.E., 2007. 'Mass medical evacuation: Hurricane Katrina and nursing experiences at the New Orleans Airport', *Disaster Management and Response*, 5(2), 56-61.
- Kulig, J. C., Penz, K., Karunanayake, C., MacLeod, M., Jahner, S., & Andrews, M. E., 2017. 'Experiences of rural and remote nurses assisting with disasters', *Australasian Emergency Nursing Journal*, 20(2), 98-106.
- Kulig, J.C., Edge, D., & Smolenski, S., 2014. 'Wildfire disasters: Implications for rural nurses', *Australasian Emergency Nursing Journal*, 17(3), 126-34.
- Li, C., Sotomayor-Castillo, C., Nahidi, S., Kuznetsov, S., Considine, J., Curtis, K., Fry, M., Morgan, D., Walker, T., Burgess, A., Carver, H., Doyle, B., Tran, V., Varshney, K., & Shaban, R.Z., 2021. 'Emergency clinicians' knowledge, preparedness and experiences of managing COVID-19 during the 2020 global pandemic in Australian healthcare settings', *Australasian Emergency Care*, 24(3), 186-96.

- Martin, R., 2009. 'Black Saturday and the Victorian bushfires: Implications for advanced nursing practice roles', *Australasian Emergency Nursing Journal*, 12(2), 30-1.
- Moussalli, I., Shine, R., 2020. 'Tropical Cyclone Damien brings flooding, gale-force winds and storm surges to WA's north', *ABC News*, 8 February 2020.
- National Asthma Council, 2021. Factsheet: Thunderstorm asthma. <https://www.nationalasthma.org.au/living-with-asthma/resources/patients-carers/factsheets/thunderstorm-asthma>
- Ness, M.M., Saylor, J., Di Fusco, L.A. & Evans, K., 2021. 'Healthcare providers' challenges during the coronavirus disease (COVID-19) pandemic: A qualitative approach', *Nursing and Health Sciences*, 23(2), 389-97.
- Noble, F., 2020. 'Government set to revise total number of hectares destroyed during bushfire season to 17 million', *9News*, 14 January 2020.
- Nursing and Midwifery Board of Australia, 2021. 'Registrant data: 01 April 2021 to 30 June 2021.' NMBA.
- Patel, K., 2020. 'After two years of drought ends, southeastern Australia turns green', *SciTech Daily*, 21 June 2020.
- Patrick, J.R., Shaban, R.Z., & Fitzgerald, G., 2011. 'Influenza: critique of the contemporary challenges for pandemic planning, prevention, control, and treatment in emergency health services', *Australasian Emergency Nursing Journal*, 14(2), 108-14.
- Pérez-Raya, F., Cobos-Serrano, J. L., Ayuso-Murillo, D., Fernández-Fernández, P., Rodríguez-Gómez, J. A., & Almeida Souza, A., 2021. 'COVID-19 impact on nurses in Spain: a considered opinion survey', *International nursing review*, 68(2), 248-55.
- Ranse, J. & Lenson, S., 2012. 'Beyond a clinical role: Nurses were psychosocial supporters, coordinators and problem solvers in the Black Saturday and Victorian bushfires in 2009', *Australasian Emergency Nursing Journal*, 15(3), 156-7.
- Rokkas, P., Cornell, V. & Steenkamp, M., 2014. 'Disaster preparedness and response: Challenges for Australian public health nurses - A literature review', *Nursing and Health Sciences*, 16(1), 60-6.
- Rosa, W.E., Fitzgerald, M., Davis, S., Farley, J.E., Khanyola, J., Kwong, J., Moreland, P.J., Rogers, M., Sibanda, B., & Turale, S., 2020. 'Leveraging nurse practitioner capacities to achieve global health for all: COVID-19 and beyond', *International nursing review*, 67(4), 554-9.
- Sato, M., Atogami, F., Nakamura, Y., & Yoshizawa, T., 2016. 'Experiences of public health nurses in remote communities during the Great East Japan Earthquake', *Health Emergency and Disaster Nursing*, 3(1), 18-27.
- Scrymgeour, G.C., Smith, L., Maxwell, H. & Paton, D., 2020. 'Nurses working in healthcare facilities during natural disasters: a qualitative enquiry', *International nursing review*, 67(3), 427-35.
- Shigemura, J., Ursano, R.J., Kurosawa, M., Morganstein, J.C., & Benedeck, D.M., 2021. 'Understanding the traumatic experiences of healthcare workers responding to the COVID-19 pandemic', *Nursing and Health Sciences*, 23(1), 7-8.
- Tavares, W., 2018. 'Impact of terrorist attacks on hospitals', *Journal of Emergency Nursing*, 44(2), 188-90.
- Willson, K.A., Fitzgerald, G.J. & Lim, D., 2021. 'Disaster management in rural and remote primary health care: A scoping review', *Prehospital and Disaster Medicine*, 36, 362-69.
- World Health Organization, 2021. Health and care worker deaths during COVID-19. <https://www.who.int/news/item/20-10-2021-health-and-care-worker-deaths-during-covid-19>
- World Health Organization, 2015. 'WHO calls for urgent action to protect health from climate change'. <https://www.who.int/news/item/06-10-2015-who-calls-for-urgent-action-to-protect-health-from-climate-change-sign-the-call>
- World Health Organization, 2020. 'Listings of WHO's response to COVID-19.' <https://www.who.int/news/item/29-06-2020-covid-timeline>
- World Wildlife Fund, 2020. Interim report: Australia's 2019-2020 bushfires: The wildlife toll. <https://www.wwf.org.au/ArticleDocuments/353/Animals%20Impacted%20Interim%20Report%2024072020%20final.pdf.aspx?OverrideExpiry=Y>



