When disaster strikes: The role of rural general practitioners



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NATURAL DISASTERS have long shaped the Australian landscape. However, their frequency and severity are changing. Human influence has increased the chance of extreme weather events since the 1950s.[1] This includes the frequency of heatwaves and droughts, fire weather and compound flooding.[1] It is virtually certain that hot extremes (including heatwaves) have become more intense and more frequent over the decades, with anthropogenic climate change as the principal driver of this.[1] Climate change has also increased heavy precipitation associated with tropical cyclones,[1] with cyclones now lasting longer,[2] becoming stronger and occurring at higher latitudes.[3] There has been an increase in extreme fire weather, and in the length of the fire season, across large parts of Australia. This has led to larger and more frequent fires, especially in southern Australia.[4]

Since 2019, 84% of Australians report being directly affected by at least one climate-related disaster: heatwaves (71%), floods (45%), bushfires (43%), droughts (37%), destructive storms (35%) and landslides (8%), with most having experienced more than one disaster in the last 5 years.[5] These figures likely underestimate the true burden, as smaller local disasters often go unrecorded despite being devastating for affected communities.[6] Rural Australians are disproportionately affected, with rural dwellers being almost 12 times more likely to have experienced a disaster since 2018 compared with those living in cities.[7] Some of these communities report experiencing disaster fatigue.[8]

Much of rural Australia is now in a state of chronic disaster exposure. The health implications of this, both acute and chronic, are well documented. For instance, cyclones are associated with an increased risk of all-cause hospitalisation for 3 months after the event, a consistently elevated risk of morbidity from injuries and an increase in morbidity rates from all infectious diseases.[9] Cyclones are also associated with a higher mental illness prevalence for up to 3 years after the event, an increase in mental health service visits and consistently higher rates of post-traumatic stress disorder (PTSD).[9] Cyclone Larry, a severe cyclone that decimated the small Queensland town of Innisfail in 2006, was found to cause moderate to severe PTSD symptoms in approximately one in five primary school children 18 months after the event.[10]

It has been estimated that major Australian bushfires during 1967–2013 resulted in over 8000 direct injuries and 433 direct fatalities.[11] Bushfire smoke exposure in Australia has been found to be associated with increases in hospitalisations or emergency department attendances for those with asthma and chronic obstructive pulmonary disease (COPD), and possibly also cardiovascular disease.[12] However, bushfire smoke also affects healthy people, rather than just those with pre-existing chronic conditions.[13] Unsurprisingly, the magnitude of bushfire-related mental health impacts in Australia is severe.[14] A substantial number of people among the general population experience long-term mental health issues after bushfire occurrence.[14]

Critically, research has shown that most disaster health effects are manageable within general practice, with local general practitioners (GPs) better positioned to provide care than outsiders.[15] GPs are at the coalface of the Australian health system, are the cornerstone of successful primary healthcare[16] and are integral to disaster response. GPs have been seen to step up and serve in a multitude of natural disasters in Australia over the years.[6] This is especially the case for rural GPs, who are the often-invisible backbone of disaster response, and who face a multitude of unique challenges.

In rural and remote Australia, the local GP clinic and/or GP-led rural hospital typically *is* the health system.[17] Rural GPs

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function as the central hub of care, where they often serve as the source of emergency care, mental healthcare provision and broader social support within their communities. Importantly, rural GPs possess a deep understanding of local community dynamics, individual patient circumstances and the social determinants shaping health in their region.

Some of the challenges faced by rural GPs, such as road access disruption, geographic isolation and distance from tertiary services, are not unique to disaster situations but instead form part of everyday practice. These conditions foster a level of adaptability, clinical independence and decision making under uncertainty that are essential during disasters. Of note, rural GPs also often serve Aboriginal and Torres Strait Islander communities and other communities facing socioeconomic challenges.[18]

Despite this, rural general practices are rarely recognised in policy as critical disaster infrastructure and are hence not resourced or protected as such. Furthermore, the inclusion of GPs in disaster health planning and response systems varies from inconsistent to entirely overlooked.[6] Most resources in disaster healthcare focus on acute secondary and tertiary services, despite the wealth of evidence of the need for strong primary healthcare systems and the known burden of primary healthcare needs in disasters.[19]

Additionally, severe workforce shortages and lack of redundancy remain a well-recognised and crucial structural issue. While rural GPs are highly capable, their capacity to respond can be hindered by limited staffing, fatigue and the absence of surge support. External assistance is therefore essential, but must be delivered in a way that complements, rather than overrides, local expertise. This further substantiates the importance of developing disaster response frameworks with the insight of rural GPs who have ample experience in their communities. Effective disaster response requires both humility from external agencies and disaster response plans that are fundamentally underpinned by a partnership approach.

It is important to note that rural GPs are not simply responders in times of disaster but can be victims themselves. This can involve a loss of their homes and/or practices, loss of lives of their loved ones, colleagues and patients, loss of their community and a damaged local environment.[19] They must therefore confront the reality of managing their patients while managing the safety of their own families and properties, often while dealing with the ongoing impacts from the disaster and profound fatigue compounded by prolonged working hours.[19] This is rarely acknowledged in disaster planning frameworks.

Practical measures to address this include ensuring access to locum relief during recovery phases, embedding psychosocial support pathways for clinicians into disaster response and developing systems that allow for redistribution of clinical load across the broader region (eg via telehealth support) when local capacity is compromised.

Experience from New Zealand shows that the systematic integration of GPs into disaster health management systems is achievable and valuable, with key factors found to be collaboration between disaster managers and GPs at local, state and national levels in planning and preparedness.[20] However, it is essential that this collaboration is meaningful, rather than a tokenistic consultation, where GPs are involved in the co-design of these systems and hence become embedded into disaster response pathways.

Rural GPs do not need to be told that they are resilient – this is self-evident. What they need is a health system that is equally resilient. Rural GPs must be systematically integrated into local disaster health response frameworks with clearly defined roles. Funding models must also reflect this, which includes workforce surge capacity. Rural GPs should be acknowledged as the highly capable specialists that they are, who make significant contributions in times of disaster. It should also be acknowledged that rural GPs are often victims of the disaster themselves and require support on a multitude of fronts.

Health systems in Australia are metro-centric, to the detriment of people living in rural communities. Rural Australians comprise almost one-third of the country's population but experience a shortfall of $1,090.47 in healthcare funding per person every year, compared with city residents (totalling an $8.35 billion expenditure gap).[21] This inequity leaves rural health systems with fewer resources to prepare for and respond to disasters, even as these events become more frequent and severe. We are living in a new reality of natural disasters and rural GPs will continue to serve an increasingly significant role in supporting their communities. Governments at every level must recognise rural general practice as being critical disaster infrastructure and integrate it into disaster preparedness, response and recovery planning. Rural GPs are essential disaster responders but need to be structurally supported as such.

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