UNDERSTANDING FIRST NATIONS COMMUNITIES’ PREPAREDNESS, CONCERNS AND STRATEGIES FOR ADDRESSING COVID-19

Final Report

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30 June 2023
Billabong Camp depicts time-worn tracks that lead to a shady place of water, where clans gather under paperbark trees after a long, hot journey. The design places people at its centre – referencing students, researchers, people and community. Tracks to a place by water and paperbark trees symbolises the energising, holistic values of the learning journey. The motifs depict people, tracks and meeting places; a story that relates to each individual, on a journey that holds limitless pathways of learning, growth and connection.
FIRST NATIONS COMMUNITIES’ PREPAREDNESS, CONCERNS, AND STRATEGIES FOR ADDRESSING COVID-19

FUNDING:

Funding for this project was provided by the Australian Partnership for Preparedness Research on Infectious Disease Emergencies (APPRISE) National Health and Medical Research Council (NHMRC) with additional support from the BHP Vital Resources Fund.

PUBLICATION DATE: 30 August 2023

PRODUCED BY: Office of Indigenous Engagement (OIE), CQUniversity, Australia

LOCATION:
CQUniversity Australia
Bruce Highway
North Rockhampton 4702

ISBN: 978-1-921047-93-0

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The contents of this report have been, or may be used in, generation of articles for peer-reviewed publication. At time of publication, these articles are still under consideration so no citation information is available.

ACKNOWLEDGEMENTS

This research was proudly supported through funding provided by the Australian Partnership for Preparedness Research on Infectious Disease Emergencies (APPRISE) Centre for Research Excellence, the National Health and Medical Research Council (NHMRC) and additional support from the BHP Vital Resources Fund.

This report is authored by staff and researchers from the Office of Indigenous Engagement, CQUniversity, Australia. The research team gratefully acknowledge the inspiring First Nations community members, Local Government Council members and staff, Local Disaster Management Group members, and Queensland State Disaster Management professionals from multiple regional and remote communities across Queensland who kindly gave their time to participate in the project. The research team also acknowledge the support and contributions made by colleagues at the Office of Indigenous Engagement and the Jawan Research Centre at CQUniversity.

In particular, the research team would like to acknowledge and sincerely thank the following for their input and guidance:

» Associate Professor Peter Massey – James Cook University, Associate Professor Medicine
» Ms Kristy Crooks – Aboriginal Program Manager, Health Protection Unit for Hunter New England Population Health
» Professor Jenni Judd – Professorial Research Fellow – Centre for Indigenous Health Equity Research, Appleton Institute, CQUniversity
Preparedness

“We were about 5% prepared for COVID.”

[Indigenous, Local Disaster Management Group member]

“We were getting directives and we were sitting in a room with three lawyers who couldn’t understand it. So how did the person on the street understand it? … I think the initial confusion was we had no idea of what legislation was going to be operating. Sorting that out, that was the major confusing element. What act are we working under? What policy are we working under? Stop changing!”

[non-Indigenous, Local Disaster Management Group member]

Planning

“The LDMG and DDMG structure don’t really accommodate for local knowledge. It’s structured in a way that the first fifteen pages of an LDMP are about the structure of it and they are not fit for purpose documents for an Indigenous council and community. They are very bureaucratic. They are so big they can’t open them on a website.”

[non-Indigenous, Other]

Response

“That was the downfall of previous years, that people made decisions as to what they see as best for the community without getting community input and that made a lot of people angry and nervous and not having an understanding of what was being implemented. You need someone who has been coming into community for a long time and they have a better understanding of community. Because every community is totally different. We might be related to some of the mob up there… but their cultural ways are different to ours.”

[Indigenous, Local Disaster Management Group member]

Recovery

“COVID’s different – you need to increase the buy-in for your LDMG. I hope it doesn’t look like your traditional LDMG. We’ve let the guys go and identify who are the influencers in their local community and engaging with them. … There is fatigue with it, sick to death of eight different NGOs [non-government organisations] or government orgs pushing different messages they’ve never seen before. I don’t know the communities well enough to say what is a good model there. They’re the ones who will come up with a good model for them.”

[non-Indigenous, Local Disaster Management Group member]
EXECUTIVE SUMMARY

Australian First Nations communities, including remote communities, are particularly vulnerable to the risks posed by the current COVID-19 pandemic. Pandemic event management falls under national and state all-hazard disaster management arrangements. In most jurisdictions, local governments are responsible for managing events through their Local Disaster Management Groups (LDMG), supported by district and state level groups. This study sought to investigate the capacity of regional and remote local governments of Australian First Nations Communities to develop and deploy pandemic disaster management strategies and plans. The study investigated the preparedness, responses, concerns, and capabilities of communities at the forefront of the pandemic disaster. Findings reported here may assist with future planning for disaster management and risk reduction that incorporates community voices and Indigenous Knowledges and Practices in future regional and remote pandemic policy development and implementation.

RESEARCH APPROACH

Two key research questions underpinned this project:

1. What are the issues, challenges, and recommendations for implementing effective local disaster management planning for First Nations Communities in regional and remote Australia to achieve appropriate and successful responses and recovery for pandemic disasters?
2. How does health information within First Nations Communities inform preparation, preparedness, response, and recovery (PPRR) for pandemic management?

KEY RESEARCH ACTIVITIES INCLUDED

1. Literature review of implementation of local disaster management planning in regional and remote First Nations communities, and how health promotion information has informed preparedness, response, and recovery in regional and remote First Nations communities as a result of COVID-19.
2. Desktop analysis of 82 Local Disaster Management Plans (LDMPs) nationally, supported by BHP Vital Resources Funding.
3. Interviews with key stakeholders in Queensland including remote local government and LDMG members, and remote community members. (Interviews outside Queensland were not possible, due to COVID-19 restrictions border.)
4. Data analysis and synthesis.
5. Targeted dissemination of research findings and recommendations.

KEY FINDINGS

This study acknowledges that the current pandemic has provided challenges across the nation due to the unprecedented scale of the pandemic and its rapidly evolving and sustained nature. The complexity and magnitude of the pandemic required hurriedly changing legislative, policy, and operational responses. However, First Nations regional and remote communities, with highly vulnerable populations, face additional challenges due to embedded social and economic inequities including access to adequate health services, housing, and other resources and infrastructure. Key findings here are drawn from a synthesis of the research activities listed above.
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1. Lack of pandemic preparedness for COVID-19
   » Desktop analysis of LDMPs and pandemic sub-plans, in conjunction with stakeholder interviews, strongly indicated that evidence gained from prior pandemic and/or infectious disease disasters has not been incorporated at the federal level and subsequent state and local government level disaster management pandemic preparation and response.
   » There was a general lack of appropriately detailed pandemic sub-plans, with some local pandemic sub-plans only being developed as COVID-19 emerged in Australia.
   » The desktop analysis revealed no evidence of Indigenous knowledges or practices being incorporated into LDMPs, in contrast with the Sendai Framework recommendations.

2. Lack of community voice in decision-making
   » Local government representatives and Indigenous community leaders felt they should be able to play a greater role in decision-making; for example, having the power to extend restrictions on non-essential visitors to their communities.
   » Leaders recognised Queensland Health was the lead agency in pandemic response but on some occasions local decisions were overridden by the state Chief Health Officer (CHO) with little consultation or recognition of local conditions. There is a need for continuous genuine discussion between all levels of government that acknowledges the uniqueness of different communities and heeds the recommendations of local leadership.
   » There is ongoing lack of consultation and consideration of First Nations regional and remote community contexts regarding pandemic preparedness and response. Given the uniqueness of different communities, there is a need for continuous genuine dialogue between national, state, and local representatives.

3. Limited local capacity
   » LDMGs were acknowledged as effective in managing local disasters but were extremely challenged in implementing effective pandemic preparation and response particularly in the provision of public health messaging suited to their communities. This was seen by some interviewees as the role of better-resourced health services.
   » Lack of adequate isolation facilities and limited existing health services were frequently mentioned. Despite initial plans to evacuate suspected or positive COVID-19 cases to health facilities in larger centres, emerging COVID-19 cases were reported to ultimately be managed in community, mostly in overcrowded homes with support provided by families and over-stretched local government and health services.
   » Many community representatives felt they had largely been left to their own capacity to manage consequences of the pandemic. The resultant low number of COVID-19 cases, as opposed to feared predictions, is a testament to the huge efforts made by leaders and community members at the local level.
4. Impact of restrictions on movement
   » The aim of stringent efforts to limit non-essential visitors to remote communities under the short-lived Biosecurity Act 2015 (Cth), (hereafter the Biosecurity Act) was acknowledged by community members to afford protection. However, the imposition of the Biosecurity Act had unintended impacts on cultural activities such as access to country to undertake hunting and gathering activities. These national, and other state restrictions on movement also impacted severely on the ability of people to attend ‘sorry business’ funeral activities and other important cultural socialisation practices. The restrictions on communities were associated with potential to negatively impact social and emotional wellbeing, at a time when access to visiting mental health services was greatly reduced.

5. Impost on remote local governments
   » Stakeholder interviews strongly indicated local governments and LDMGs were well-experienced with management of and response to natural disasters such as floods and cyclones. However novel pandemic-related burdens on already under-resourced local governments included impact on staff time and financial costs. The impacts included huge, sustained efforts to combat the flood of misinformation mainly on social media; provision of intense support for vaccination efforts; and management of requests for community visits during arrangements under the Biosecurity Act.
   » Financial impacts included challenges in timely completion of capital works projects, hampered both by rising costs and difficulties in sourcing outside contractors. Furthermore, pandemic-related costs incurred by local governments are not subject to reimbursement under current disaster recovery arrangements.

6. Disaster management and health nexus
   » The insertion of Queensland Health as the lead agency into the existing disaster management arrangements appears to have led to a top-down approach. This would seem an inversion of the existing disaster management arrangements where state and district groups have a focus on directing their efforts to supporting local efforts. Further, this approach is not in keeping with the priorities of the Sendai Framework for Disaster Risk Reduction (UNDRR, 2015) and/or the rights and goals for self-determination for First Nations communities.
   » There is a long history of data collation and knowledge development of natural disaster management generally. But there is clearly insufficient knowledge or understanding on the overlaps and complexities of the nexus between disaster management and pandemic disaster management and the multiple layers of risk and responses needed to best support regional and remote First Nations communities.
   » Guiding documents such as the “2020 Queensland Whole-of-Government Pandemic Plan” contain little information regarding operational roles or responsibilities apportioned to Queensland Health and LDMGs; this appears to have contributed to realised expectations on either side.

7. Current effective approaches to public health messaging for First Nations communities
   » The review of the literature of development, implementation and use of health promotion information demonstrated that much of the information about health promotion and messaging is already well-established.
When designed by Indigenous health leaders in partnership with local community members, public health messaging for First Nations communities is more effective than that produced principally by non-Indigenous stakeholders.

Data analysis identified five enablers of effective COVID-19 public health messaging for First Nations Peoples globally including: renewed approaches to messaging; culturally competent health promotion; collaborative health messaging and program design; holistic approaches to messaging; and incorporation of traditional healing in messaging.

8. **Key local pandemic-related issues and challenges identified in stakeholder interviews**

The most-frequently mentioned themes identified as both issues and challenges included:

- **Biosecurity arrangements:** mentioned above; other impacts included the quarantine of community members of those who were either caught out of their communities or had to travel to larger centres for a range of reasons. Management of those in quarantine awaiting to return to their communities required complex social and emotional support. In order to manage the impact of these arrangements, two shires and a township near to discrete Aboriginal communities elected to be included in the biosecurity-designated areas in order to provide access to supplies.

- **Communication and messaging:** while enormous effort was made to ensure effective communication between state and local levels of pandemic management, the complex and rapidly changing legislative, policy, and directive environment caused confusion for the LDMGs responsible for planning and implementing appropriate responses. The changes also impacted on timely dissemination of state-sourced information. Community members reported that the changes in messages and some lack of information led to them not knowing whether information was accurate or relevant, and/or misunderstanding their level of risk. Specific suggestions from community members for further information included: more information on the safety or risk associated with vaccinations; understanding of the source of the disease; signs and symptoms of active infection and disease progression including long-term effects.

- **Misinformation:** this was mostly related to either vaccination side effects or the level of potential risk for remote First Nations Peoples and was circulated largely through social media. Efforts to constantly combat this misinformation added to the load of local governments. A further but less-frequently mentioned concern was based on historical mistrust of government related to colonisation and previous restrictions on movement associated with the early “management practices” imposed on First Nations Peoples.

- **Impact on cultural activities:** as reported above, there were severe impacts on both the ability to properly undertake funeral activities, access to country and attend cultural activities such as hunting, gathering and usual socialisation processes.

- **Socio-economic impacts:** most-frequently mentioned was the pre-existing disadvantage in remote communities including high rates of chronic disease, overcrowded homes, and the high cost of locally purchased food. In those research sites with businesses targeting tourists, negative impacts were reported including lack of availability of staff. Downturns in trade also resulted in closure of some long-standing businesses.
Mental wellbeing: this theme was most-frequently mentioned as an issue alone. Community members reported a great deal of fear related to vaccination side effects and some fears of perceived high rates of mortality associated with COVID-19. Many expressed fears for the potential higher morbidity for their elderly community members and those with chronic disease. There was further fear for vulnerable transient First Nations Peoples, perceived to be a challenge with regards to access to vaccinations and support. Concerns were also expressed regarding the potential influx of travellers and associated COVID-19 transmission following the lifting of travel restrictions. A potential increase in domestic violence was reported associated with family quarantine of positive cases at a time when access to mental health services was extremely limited. Of concern was the report of suicides of two young men, thought to be related to their inability to attend work outside of their community.

9. **Accuracy of data collection**

- Frequent concerns were expressed by community leaders regarding under-reporting of local vaccination rates with suggestions that this was perhaps due to the use of multiple databases, inaccurate population estimates due to large transient populations, and incorrect identification of residential address on Medicare cards.
- National data reports of COVID-19 cases showed disparities between reporting periods, lags in data reported from regional and remote communities and high rates of unknown Indigenous status (which is important because it informs resource allocation and timely responses at the local level).

**RECOMMENDATIONS**

The National Aboriginal and Torres Strait Islander Advisory Group on COVID-19 was established in March 2020 (NACCHO, 2022). Key roles of this group include the development and implementation of the Management Plan for Aboriginal and Torres Strait Islander populations, which supports the Australian Health Sector Emergency Response Plan for Novel Coronavirus (COVID-19) (AGDoHA, 2020). The plan has a focus on clinical and public health actions and responses, with emphasis on effective communication and social determinants of health. Principles adopted in the development of the plan include:

- shared decision-making between Governments and Aboriginal and Torres Strait Islander Peoples
- community control as expressed through the Aboriginal and Torres Strait Islander Community Controlled Health Sector
- cultural safety and equity across the whole-of-population health care system
- data and evidence to inform responses that are inclusive of Aboriginal and Torres Strait Islander knowledge.

Underpinning the plan is the philosophy that developing approaches to COVID-19 responses and future pandemics of any other type must be based upon the self-determination of Aboriginal and Torres Strait Islander Peoples as proposed under current international agreements. With these principles in mind, the key findings of the research activities provide the basis for the following recommendations.
RECOMMENDATION 1: REVIEW OF LOCAL DISASTER MANAGEMENT PLANS AND PANDEMIC SUB-PLANS TO INCLUDE COMMUNITY VOICES AND ENGAGEMENT

» The required annual reviews, undertaken by the relevant state agency, need to be up-to-date and ensure more detailed local, culturally and socially grounded responses to pandemic disasters. These review processes will require adequate resourcing dependent on local capacities and capabilities.

» There needs to be consideration of local community contexts and capacity (e.g., sufficient isolation facilities, and adequate health support services, etc.).

» All relevant stakeholders must be included in planning and drafting the disaster management plans and pandemic sub-plans.

» Given the complexity of legislative environment of disaster management planning, consideration be given to the development of more accessible guidance documents to assist with the development of LDMPs and the membership of LDMGs.

RECOMMENDATION 2: REVIEW OF IMPLEMENTATION OF THE BIOSECURITY ACT 2015

» The Biosecurity Act was revised in 2021 (AG, 2021). However, based on evidence arising from this study, significant review and revision of the associated directives regarding declared travel zones, (i.e., restrictions of visitors to designated remote communities) needs to be ongoing. This review and subsequent revisions should include direct consultation with First Nations leaders and community members as co-writers of policy/legislature that affects them; with special representation for regional and remote communities, with regard to local management to provide better access to country, and acknowledgement of First Nation cultural and social considerations.

RECOMMENDATION 3: BETTER CO-OPERATION BETWEEN STATE GOVERNMENT HEALTH AND HOSPITAL SERVICES, ABORIGINAL COMMUNITY CONTROLLED HEALTH ORGANISATIONS (ACCHOs), LOCAL DISASTER MANAGEMENT GROUPS (LDMGs), AND LOCAL GOVERNMENT

» Currently, the health and disaster management nexus is not adequately described in state disaster management and health pandemic management documents. There needs to be a clear expression of roles and responsibilities at all levels but particularly at the local level, guided by more detailed whole-of-government planning documents. One example of this is the need for mutually supportive collaboration between state health, local government and ACCHOs in the development and timely distribution of community-level public health messaging.

» There is a need for strong place-based partnerships at the community level to improve operational expression of the nexus between health systems and disaster management systems.

» There needs to be clear evidence of inclusion of representation of all health services – including state- and community-controlled services – on the LDMGs when undertaking pandemic-related strategy development and planning.

RECOMMENDATION 4: ASSESSMENT OF THE FINANCIAL IMPACTS OF PANDEMIC RESPONSES ON REGIONAL AND REMOTE LOCAL GOVERNMENTS, AND REVIEW OF THE CURRENT DISASTER COST-RECOVERY ARRANGEMENTS WITH A VIEW FOR PROVISION OF RECOVERY OF THE EXTRAORDINARY PANDEMIC-RELATED COSTS INCURRED.

» As pandemic-related costs incurred by remote local governments may not be immediately apparent, we recommend that an assessment of these costs be undertaken within the next two years and an ongoing
costing activity be developed whereby councils can report moving averages of the costs they have borne, as different kinds of pandemic and post-pandemic impacts appear.

- Special consideration needs to be given to the financial constraints and resources of remote local governments with a view to facilitating disaster management cost-recovery for unforeseen pandemic-related costs incurred.

**Recommendation 5: That recognised, effective health promotion messaging approaches for First Nations audiences are more widely utilised in advance of the next pandemic**

- Utilisation of communications learnings gained from the current (and previous) pandemics and health crises be adopted and implemented – ensuring that significant, targeted engagement with appropriate First Nations community leaders and influencers is implemented to assure rapid and timely messaging targeting First Nations Peoples to prepare for future events.
- Improved collaboration between Indigenous public health units, ACCHOs, other health related non-government organisations, LDMGs and community members.
- Incorporation of face-to-face approaches in message delivery between community members and community leaders and trusted health professionals.
- Development of resources in local languages where English is not the primary language spoken.
- Focusing messaging on education for youth and community members concerning the spread of communicable diseases and access to vaccinations and equitable access to health services.

**Recommendation 6: Continuous collection and ongoing reporting of accurate pandemic data from health surveillance systems including vaccination rates and COVID-19 (or other pandemic) positive cases**

- With vaccination a vital component to ending the acute phase of current and future pandemics, confidence in rapidly analysed, accurate, ongoing surveillance data is key to informing policy adjustments. There were concerns among local leaders regarding the under-reporting of data on Indigenous vaccination rates.
- With a high risk of resurgence of COVID-19 (and/or emergence or other pandemic diseases) there is a need for improved and prioritised access to testing, with a rapid turnaround time for test results.
- Data retrieval and presentation need to be easily accessible at the local level.

**Recommendation 7: Strategies be developed to ensure adequate and uninterrupted mental health services be maintained for regional and remote First Nations communities during a pandemic**

- This will require strategic planning through better collaboration between LDMGs and visiting services.
- Greater use of telehealth models of care where adequate telecommunications systems are available.
- Recommended social and emotional wellbeing models of care are more accessible through partnerships with ACCHOs and government in keeping with recommendations made in the report "A National COVID-19 Pandemic Issues Paper on Mental Health and Wellbeing for Aboriginal and Torres Strait Islander Peoples" (Dudgeon, Wright, et al., 2020).
RECOMMENDATION 8: FURTHER RESEARCH INTO LOCAL DISASTER MANAGEMENT UNDERTAKEN IN REGIONAL AND REMOTE FIRST NATIONS COMMUNITIES AUSTRALIA-WIDE

The stakeholder interviews were undertaken in a portion of Queensland only and the desktop analysis of LDMPs and pandemic sub-plans was limited due to the capacity of researchers to access and review these plans. As per the original research proposal, further research needs to be undertaken more broadly to encompass the variety of disaster management and local community governance contexts Australia-wide and to examine the pandemic sub-plans that have been developed since the study was undertaken.

- The range of stakeholders should include representatives from health, education, and police services.
- Further research could also include researching best practice that has been used in other First Nations communities’ (e.g. New Zealand, Canada) pandemic responses.

RECOMMENDATION 9: DEVELOPMENT OF A KNOWLEDGE DATABASE OF INDIGENOUS KNOWLEDGES & PRACTICES TO SUPPLEMENT AND SUPPORT SCIENTIFIC KNOWLEDGE AROUND PANDEMIC AND DISASTER PREVENTION, PREPAREDNESS, RESPONSE, AND RECOVERY

- Practitioners and the community of disaster management professionals has accrued an extensive database of knowledge particularly for natural disasters in terms of the ‘Australian Disaster Resilience Knowledge Hub’ (see: https://knowledge.aidr.org.au/) within the Australian Government National Emergency Management Agency. However, there is a need for specific subsets of this hub to inform:
  a) First Nations’ knowledges, practices and responses;
  b) pandemic responses generally; and
  c) pandemic responses in First Nations populations and contexts to better meet the needs of populations across Australia and globally.
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Table 10: DMFNC pivot table of the raw counts of primary, secondary and tertiary qualitative coding using 73 primary codes as the thematic categories for further grouping to sort data from 105 total open codes

Table 11: HPFNC pivot table of the raw counts of primary, secondary and tertiary qualitative coding using 35 primary codes as the thematic categories for further grouping to sort data from 105 total open codes
## Abbreviations & Acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC</td>
<td>Australian Broadcasting Corporation</td>
</tr>
<tr>
<td>ABS</td>
<td>Australian Bureau of Statistics</td>
</tr>
<tr>
<td>AG</td>
<td>Australian Government</td>
</tr>
<tr>
<td>AGDoHA</td>
<td>Australian Government Department of Home Affairs</td>
</tr>
<tr>
<td>AGDoH</td>
<td>Australian Government Department of Health</td>
</tr>
<tr>
<td>AGDoHA</td>
<td>Australian Government Department of Health and Ageing</td>
</tr>
<tr>
<td>AGDoHAC</td>
<td>Australian Government Department of Health and Aged Care</td>
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<tr>
<td>AH&amp;MRC</td>
<td>Aboriginal Health and Medical Research Council of NSW</td>
</tr>
<tr>
<td>AHMPPI</td>
<td>Australian Health Management Plan for Pandemic Influenza</td>
</tr>
<tr>
<td>AIHR</td>
<td>Australian Institute for Disaster Resilience</td>
</tr>
<tr>
<td>APPRISE CRE</td>
<td>Australian Partnership for Preparedness Research on Infectious Disease Emergencies Centre for Research Excellence</td>
</tr>
<tr>
<td>CALD</td>
<td>Culturally and Linguistically Diverse Community</td>
</tr>
<tr>
<td>CHO</td>
<td>Chief Health Officer</td>
</tr>
<tr>
<td>COVID/COVID-19</td>
<td>Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2); Novel Coronavirus (COVID-19)</td>
</tr>
<tr>
<td>DDNG</td>
<td>District Disaster Management Group</td>
</tr>
<tr>
<td>DM</td>
<td>Disaster Management</td>
</tr>
<tr>
<td>DMFNC</td>
<td>Disaster Management First Nation Communities Literature Review</td>
</tr>
<tr>
<td>DMP</td>
<td>Disaster Management Plan</td>
</tr>
<tr>
<td>Go8</td>
<td>Group of Eight Australia universities</td>
</tr>
<tr>
<td>HPFNC</td>
<td>Health Promotion First Nations Communities Literature Review</td>
</tr>
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<td>LDMG(s)</td>
<td>Local Disaster Management Group(s)</td>
</tr>
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<td>LDMP(s)</td>
<td>Local Disaster Management Plan(s)</td>
</tr>
<tr>
<td>LEMA</td>
<td>Local Emergency Management Arrangements</td>
</tr>
<tr>
<td>LG</td>
<td>Local Government</td>
</tr>
<tr>
<td>LGA(s)</td>
<td>Local Government Area(s)</td>
</tr>
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<td>LGAQ</td>
<td>Local Government Association of Queensland</td>
</tr>
<tr>
<td>IKP</td>
<td>Indigenous Knowledges and Practices</td>
</tr>
<tr>
<td>NACCHO</td>
<td>National Aboriginal Community Controlled Health Organisation</td>
</tr>
<tr>
<td>NIAA</td>
<td>National Indigenous Australian Agency</td>
</tr>
<tr>
<td>NHMRC</td>
<td>National Health and Medical Research Council</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<tr>
<td>PHC</td>
<td>Primary Health Care</td>
</tr>
<tr>
<td>PAHO</td>
<td>Pan American Health Organisation</td>
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<tr>
<td>PCR</td>
<td>Polymerase Chain Reaction test</td>
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<td>PPRR</td>
<td>Prevention, Preparedness, Response and Recovery</td>
</tr>
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<td>QDMC</td>
<td>Queensland Disaster Management Committee</td>
</tr>
<tr>
<td>QFES</td>
<td>Queensland Fire and Emergency Service</td>
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<tr>
<td>QG</td>
<td>Queensland Government</td>
</tr>
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<td>QH</td>
<td>Queensland Health</td>
</tr>
<tr>
<td>QSDMP</td>
<td>Queensland State Disaster Management Plan</td>
</tr>
<tr>
<td>RAT</td>
<td>Rapid Antigen Test</td>
</tr>
<tr>
<td>RFDS</td>
<td>Royal Flying Doctor Service</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations Organisation</td>
</tr>
<tr>
<td>UNDESA</td>
<td>United Nations Department of Economic and Social Affairs</td>
</tr>
<tr>
<td>UNDRR</td>
<td>United Nations Office for Disaster Risk Reduction</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organisation</td>
</tr>
<tr>
<td>WSLHD</td>
<td>West Sydney Local Health District</td>
</tr>
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1 INTRODUCTION

This project aimed to build on previous research on H1N109 (NHMRC grant nos. 601034 & 601025) funding under the APPRISE CRE (NHMRC grant no. 1116530) of First Nations community panels. That previous study was limited in scope and had restricted capacity to explore improved ways to assess the effectiveness of Indigenous local governments’ development and deployment of pandemic disaster management plans.

Respiratory infections, such as the H1N1 influenza A virus (H1N1) and Coronavirus (COVID-19), are highly contagious diseases. The brunt of the 2009 H1N1 epidemic fell on Australia’s First Nations communities (Australian Government Department of Home Affairs [AGDHA], 2022b; Bishop et al., 2009; Miller & Durrheim, 2010). While Australia’s First Nations Peoples represented approximately 3% of the population in 2009, they experienced higher rates of serious infection, illness, and mortality than non-Indigenous Australians — accounting for 20% of hospital admissions, and 13% of deaths from the virus (Gall et al., 2020). As noted in the Annual Report of the National Influenza Surveillance Scheme, 2009 (Pennington et al., 2017, p. E434):

Nationally, among Indigenous Australians, the age standardised notification rate of confirmed influenza A(H1N1) pdm09 was 595.9 per 100,000 population, which was over three times the rate experienced by the non-Indigenous Australian population (168.4 per 100,000 population). The highest crude rate of cases was reported in the Northern Territory (1,438.5 per 100,000 population), followed by Queensland (1,039.7 per 100,000 population) ... Differences in transmission patterns in the community setting, testing practices, prevalence of co-morbidities, population structure as well as ascertainment of Indigenous status, may partially explain some of the differences in crude notification rates between jurisdictions.

First Nations Peoples are potentially more likely to experience severe outcomes from infection, and mortality, from pandemics based on past experiences with H1N1, the 1918 Spanish Influenza pandemic, and seasonal flu outbreaks (T. Power et al., 2020). Despite this long history of prior experience, the Commonwealth Government’s third iteration of the national planning document, the 2008 version of the “Australian Health Management Plan for Pandemic Influenza” (AHMPPi) (Australian Government Department of Health and Ageing [AGDoHA], 2008), excluded Indigenous participation in its strategizing for pandemic preparedness and response planning (Miller & Durrheim, 2010). While that plan noted the importance of "equity of care" and recognised “the special needs, cultural values and religious beliefs of different members of our community”, including particular reference to “vulnerable individuals, such as Aboriginal and Torres Strait Islander Peoples and people who are culturally and linguistically diverse” (AGDoHA, 2008, p. 27), the plan at that point only noted there was yet to be developed a further annexure – the “Aboriginal and Torres Strait Islander Health Service Annex”.

The updated AHMPPi (2019) has since adopted a more detailed and inclusive approach to decision-making. As noted in the AHMPPi (2019) at Section 4.2.5 Health sector consultation (AGDoH, 2019, p. 38):

Consultation will be integral to decision-making regarding the approach to managing an influenza pandemic. Wherever possible, this will be conducted through existing channels. Key advisory committees, in addition to providing expert advice will also be used as vehicles for consultation in their field of expertise. Consultative fora and peak bodies, such as aged care peak bodies, key national primary care organisations, national nursing organisations, representatives of medical specialist colleges and pharmaceutical organisations will be used to reach key non-government health sector areas. Feedback from these organisations–which will reflect the on-the-ground experience of health sector and public concerns, and evidence of the effectiveness of approaches
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and specific interventions—will be input into decision-making processes to better tailor the response to community needs.

However, while the process proports to be inclusive, the document also notes that the National Aboriginal Community Controlled Health Organisations are considered only as one of the “consultative health fora” alongside the “GP Roundtable” and the “Aged Care Peak Bodies” (see section 4.2 of AGDoH, 2019, p. 34). First Nations communities, leaders and their health providers were again relegated to a position well down the list of potential sources of information in the event of a pandemic rather than having a voice in the preparation, preparedness, and response planning phases specific for their communities and cultural contexts.

As a result of these oversights, the federal government was left scrambling to catch up when the next big pandemic ensued – COVID-19. The National Aboriginal and Torres Strait Islander Advisory Group on COVID-19 was established in March 2020 (National Aboriginal Community Controlled Health Organisation [NACCHO], 2022), to fast-track an emergency response plan for First Nations communities which indicates the high threat COVID-19 represented. While a welcome addition to the pandemic response, it highlighted and reinforced the lack of overall consultation and action in the past decade since the 2009 H1N1 pandemic. That inaction has been evident from successive Australian governments who have failed to actively and effectively engage with First Nations communities in the response to, and recovery from, pandemics.

1.1 RESEARCH AIM

As previously noted, the current study sought to extend the 2009 H1N1 pandemic project. The study explored the current capacity of First Nations local governments to develop and deploy pandemic disaster management strategies and plans, to better prepare their communities to respond to, and recover from, a pandemic situation. This research aimed to assess the extents to which regional and remote local governments with high populations of Indigenous community members have incorporated Indigenous Knowledges and/or Practices (IKP) in their responses to pandemic infectious disease outbreaks to prepare for COVID-19 through:

» Gaining an understanding of what is required for community preparedness for addressing COVID-19 pandemic.
» Evaluating feasibility and effectiveness of implementing disaster management plans in regional and remote Indigenous local government councils and shires and/or LGAs with high proportions of Indigenous community members in controlling COVID-19.
» Providing recommendations and feedback to regional and remote local governments on ways to improve alignment or to adapt existing strategies to national and state pandemic and COVID-19 plans.
» Providing health promotion and health literacy information about ways to control COVID-19 that can be locally developed that links to the social, cultural, and economic conditions of regional and remote First Nations communities for disaster management plans.

1.2 RESEARCH QUESTIONS

Two research questions underpin this project:

1. What are the issues, challenges, and recommendations for implementing effective local disaster management planning for First Nations Communities in regional and remote Australia to achieve appropriate and successful responses and recovery for pandemic disasters?
2. How does health information within First Nations Communities inform prevention, preparedness, response, and recovery (PPRR) for pandemic management?
1.3 ISSUES ADDRESSED

The research sought to:

» Gain access to disaster management plans of Indigenous local government councils and shires and/or LGAs with high proportions of Indigenous community members, to assess their alignment with current national and state plans for pandemic influenza and strategies to control COVID-19.

» Provide recommendations and feedback to local governments and shires using a First Nations community panel model on ways to improve alignment or to adapt existing strategies to national and state pandemic and COVID-19 plans.

» Evaluate the feasibility and effectiveness of implementing disaster management plans in regional and remote local governments and shires, in controlling COVID-19.

» Examine health promotion literature and practice to provide First Nations communities with appropriate health promotion and health literacy information about ways to control COVID-19 that can be locally developed. The feedback needs to link with the social, cultural, and economic conditions of regional and remote First Nations communities for effective disaster management plans.

The key research activities of the project included: literature reviews; a desktop data analysis of LDMPs; data and information-gathering through interviews, surveys, and focus groups with key stakeholders and community member engagement; data integration and analysis; and research translation with a focus on dissemination of findings to key decision-makers (Figure 1).

Figure 1: Key research activities

Ethical approval for the project was granted by the CQUniversity Human Research Ethics Committee (CQU HREC clearance number: 22672). The research was guided by the "Ethical Guidelines for Research with Aboriginal and Torres Strait Islander Peoples" and the "Australian Institute of Aboriginal and Torres Strait Islander Studies Guidelines".

The following sections of this report offer:

» background information about the impacts of COVID-19 in First Nations communities;

» an in-depth review of literature across two key streams of 1) pandemic disaster management and responses for First Nations communities and 2) pandemic health promotion literature for First Nations communities;

» a desktop analysis of disaster management plans across Australia for regional and remote LGAs with high First Nations populations;

» discussion of the research methodology and the key findings from key stakeholder and community member interviews; and

» discussion of the findings, recommendations, and policy implications arising from the research complete the report.


2 BACKGROUND & CONTEXT

The Coronavirus (COVID-19 or SARS-CoV-2) pandemic continues to disrupt economies and devastate communities worldwide. By late-March 2022, there had been more than 482 million confirmed cases recorded across 190 countries with 6.13 million deaths (Ritchie et al., 2020) – a computed case fatality ratio of 1.27%. The global case numbers were continuing to rise by around 1.42 million cases per day (Ritchie et al., 2020).

Australia had recorded 4.14 (approx.) million cases of COVID-19 and 5,897 deaths (AGDoH, 2022) – a computed case fatality ratio of 0.14%. In Queensland, there had been 747,434 total cases recorded and some 727 deaths (Queensland Government [QG], 2022b) from the pandemic. Of approximately 5.241 million people in Queensland (QG, 2022a, p. 1), this equates to 14.26% of the total population having thus far reported positive cases for the virus and an overall 0.1% computed case fatality ratio. While these statistics were still concerning for Australia, on the global stage Australia has achieved some of the best overall outcomes in terms of both pandemic management and economic resilience.

However, COVID-19 (and indeed, pandemics in general) pose significant additional threats to First Nations Peoples worldwide. As noted by the United Nations Department of Economic and Social Affairs [UNDESA]:

> COVID-19 presents a new threat to the health and survival of Indigenous Peoples. Indigenous Peoples in nearly all countries fall into the most “vulnerable” health category. They have significantly higher rates of communicable and non-communicable diseases than their non-Indigenous counterparts, high mortality rates and lower life expectancies. Contributing factors that increase the potential for high mortality rates caused by COVID-19 in Indigenous communities include mal- and undernutrition, poor access to sanitation, lack of clean water, and inadequate medical services. Additionally, Indigenous Peoples often experience widespread stigma and discrimination in healthcare settings such as stereotyping and a lack of quality in the care provided, thus compromising standards of care and discouraging them from accessing health care, if and when available. (Lane & Cerda, 2020, p. 1)

As a consequence of the combination of complex, endemic, social, economic, and health circumstances that beset First Nations Peoples globally (Díaz de León-Martínez et al., 2020), collectively Indigenous communities suffer higher mortality, significant co-morbidities, and a wide range of other (unforeseen) challenges than may be the case for many other non-Indigenous populations (UNDESA, 2020).

In comparison with the general Australian national population statistics presented above, COVID-19 statistics for First Nations Peoples of Australia show greater impacts on the population and are also more difficult to assess due to significant issues with data capture and clarity. Using the national epidemiology reports for Australia (2020-2022), statistics for November 2021 through to March 2022, Table 1 shows a dramatic picture of case numbers for Indigenous Australians.

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3 This statistical analysis was completed in May 2022. As of the date of this report of 30 June 2023, Australia was still recording a rolling 7-day average of 1,577 new COVID-19 cases per day and 20 deaths per day overall attributed to COVID-19. See: AGDoHA (2023) “Weekly COVID-19 reporting” website for more information available at: https://www.health.gov.au/health-alerts/covid-19/weekly-reporting#covid19-associated-deaths.
Table 1: Number of new polymerase chain reaction (PCR) confirmed cases for Australian First Nations communities, November 2021-March 2022

<table>
<thead>
<tr>
<th>COVID-19 Australia: Epidemiology Report Number</th>
<th>Reporting period</th>
<th>Total number of new confirmed cases for the current reporting period</th>
<th>Number of new PCR confirmed cases for First Nations People for the current reporting period</th>
<th>First Nations People as percentage of current reporting period confirmed cases</th>
<th>First Nations People as percentage of all confirmed cases since beginning of epidemic</th>
<th>Percentage of confirmed cases notified with unknown Indigenous status *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report 51</td>
<td>13 Sept–26 Sep 2021 (2-week period)</td>
<td>23,855</td>
<td>1,222</td>
<td>5.12% (1,222/23,855)</td>
<td>3% (3,108/99,027)</td>
<td>23% (22,400/99,027)</td>
</tr>
<tr>
<td>Report 52</td>
<td>27 Sep – 10 Oct 2021 (2-week period)</td>
<td>30,727</td>
<td>1,309</td>
<td>4.26% (1,309/30,727)</td>
<td>3% (4,478/130,138)</td>
<td>23% (29,817/130,138)</td>
</tr>
<tr>
<td>Report 53</td>
<td>11 Oct–24 Oct 2021 (2-week period)</td>
<td>30,727</td>
<td>1,152</td>
<td>3.75% (1,152/30,727)</td>
<td>4% (6,233/159,393)</td>
<td>19% (29,926/159,393)</td>
</tr>
<tr>
<td>Report 54</td>
<td>25 Oct – 7 Nov 2021 (2-week period)</td>
<td>21,382</td>
<td>1,244</td>
<td>5.81% (1,244/21,382)</td>
<td>4% (7,605/180,418)</td>
<td>19% (34,440/180,418)</td>
</tr>
<tr>
<td>Report 55</td>
<td>8 Nov-21 Nov 2021 (2-week period)</td>
<td>18,166</td>
<td>869</td>
<td>4.78% (869/18,166)</td>
<td>4.9% (8,583/198,830)</td>
<td>19% (38,386/198,830)</td>
</tr>
<tr>
<td>Report 56</td>
<td>22 Nov-5 Dec 2021 (2-week period)</td>
<td>19,164</td>
<td>404</td>
<td>2.11% (404/19,164)</td>
<td>4% (8,962/217,725)</td>
<td>19% (41,676/217,725)</td>
</tr>
<tr>
<td>Report 57</td>
<td>6 Dec 2021-16 Jan 2022 (6-week period)</td>
<td>1,036,995 (33,083 + 293,270 + 800,642)</td>
<td>20,322 (829 + 3,855 + 15,638)</td>
<td>1.96% (20,322/1,036,995)</td>
<td>2.34% (29,328/1,254,909)</td>
<td>49% (516,378/2,154,909)</td>
</tr>
<tr>
<td>Report 58</td>
<td>17 Jan-13 Feb 2022 (4-week period)</td>
<td>593,855 (418,218 + 175,637)</td>
<td>16,907</td>
<td>2.85% (16,907/593,855)</td>
<td>2.6% (48,391/1,874,367)</td>
<td>46.4% (761,694/1,639,839)</td>
</tr>
<tr>
<td>Report 59</td>
<td>14 Feb-13 Mar 2022 (4-week period)</td>
<td>267,300 (148,850 + 127,450)</td>
<td>9,955</td>
<td>3.6% (9,955/267,300)</td>
<td>3.1% (58,736/1,919,886)</td>
<td>22% (429,177/1,919,886)</td>
</tr>
</tbody>
</table>


These statistics demonstrate that, as a percentage of the total population, from 13th September to the 21st November 2021, PCR recorded cases for First Nations Peoples were tracking above parity for the Australian population average statistics. However, in the analysis and interpretation of the data compiled in Table 1, there are a number of significant points to highlight:

1. The analysis revealed that there are disparities in the reporting periods used in the national epidemiology reports in the presentation of data. The earlier reports were focused on two-week intervals (reports #51-56), while later reports contain four-week periods, and one a six-week interval. Thus, an averaging process was needed to gain comparability of reporting periods where other options were not available. Therefore, in data presented for Reports #57-59, the total numbers of new PCR confirmed cases for the total population and for the First Nations populations, have included two-week interval case numbers where this information was available (see data points noted with A and highlighted Pink).

2. To further add to the data clarity issue, regional and remote communities reported a data lag, whereby cases were either not recorded accurately or were not included in the correct reporting periods. Indigenous populations generally suffer from data exclusions and insecurity (see for example Cable, 2021; Carroll et al., 2021; Griffiths et al., 2021; Schulze & Yadav, 2021). However, as governments used real-time data to track...
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...case numbers, hospitalisations, health service access, and other information to enable health responses and resource allocations, this widened the gaps in already unequal and inequitable social and health outcomes.

3. The large numbers of cases reported that are of unknown Indigenous status (as noted at data point B and highlighted Orange) demonstrate that between one fifth and half of the reported cases have not stated/recorded Indigenous status. This potentially leads to further under-reporting of First Nations case rates which then leads to the potential of lowered emphasis being afforded to Indigenous community transmission and response resourcing.

Table 2 and Table 3 below provide detailed breakdowns of First Nations Peoples’ case rates by area of remoteness for cases confirmed by PCR testing.

Table 2: PCR confirmed cases of COVID-19 among Aboriginal and Torres Strait Islander Peoples by place of acquisition and area of remoteness, 1 January-26 September 2021 *

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Major city</th>
<th>Inner regional</th>
<th>Outer regional</th>
<th>Remote</th>
<th>Overseas resident</th>
<th>Unknown</th>
<th>Under initial investigation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT</td>
<td>42</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>42</td>
</tr>
<tr>
<td>NSW</td>
<td>1,911</td>
<td>521</td>
<td>135</td>
<td>260</td>
<td>4</td>
<td>34</td>
<td>8</td>
<td>2,873</td>
</tr>
<tr>
<td>NT</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>QLD</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>SA</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TAS</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>VIC</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>30</td>
<td>38</td>
<td>38</td>
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<td>WA</td>
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<td>0</td>
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<td>0</td>
<td>1</td>
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<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Australia</td>
<td>1,964</td>
<td>521</td>
<td>135</td>
<td>260</td>
<td>8</td>
<td>34</td>
<td>38</td>
<td>2,960</td>
</tr>
</tbody>
</table>

* Source: NINDSS, extracted on 28 September 2021 for notifications up to 26 September 2021.
(Source: Epidemiology Report #51, COVID-19 National Incident Room Surveillance Team, 2021a)

Table 3: PCR confirmed cases of COVID-19 among Aboriginal and Torres Strait Islander People by area of remoteness, 15 December 2021-13 March 2022 *

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Major city</th>
<th>Inner regional</th>
<th>Outer regional</th>
<th>Remote</th>
<th>Overseas resident</th>
<th>Unknown</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT</td>
<td>699</td>
<td>15</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>14</td>
<td>732</td>
</tr>
<tr>
<td>NSW</td>
<td>17,058</td>
<td>8,684</td>
<td>2,618</td>
<td>554</td>
<td>11</td>
<td>225</td>
<td>29,150</td>
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<tr>
<td>NT d</td>
<td>0</td>
<td>0</td>
<td>252</td>
<td>326</td>
<td>0</td>
<td>38</td>
<td>616</td>
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<tr>
<td>QLD</td>
<td>5,956</td>
<td>3,061</td>
<td>6,400</td>
<td>1,128</td>
<td>1</td>
<td>30</td>
<td>16,576</td>
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<tr>
<td>SA</td>
<td>2,868</td>
<td>469</td>
<td>1,315</td>
<td>974</td>
<td>84</td>
<td>33</td>
<td>5,743</td>
</tr>
<tr>
<td>TAS</td>
<td>9</td>
<td>411</td>
<td>225</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>651</td>
</tr>
<tr>
<td>VIC</td>
<td>3,296</td>
<td>1,286</td>
<td>372</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>4,962</td>
</tr>
<tr>
<td>WA d</td>
<td>213</td>
<td>13</td>
<td>19</td>
<td>39</td>
<td>0</td>
<td>1</td>
<td>285</td>
</tr>
<tr>
<td>Australia</td>
<td>30,099</td>
<td>13,939</td>
<td>11,205</td>
<td>3,026</td>
<td>96</td>
<td>350</td>
<td>58,715</td>
</tr>
</tbody>
</table>

* Source: NINDSS, extracted on 16 March 2022 for notifications up to 13 March 2022.
(Source: Epidemiology Report #59, COVID-19 National Incident Room Surveillance Team, 2022c)
Following the national progression of the disease in Australia, as shown in Table 2, NSW was the epicentre for the disease outbreak with most cases for First Nations Peoples also following the general population trends. Therefore, initially the majority of cases were located in major city (Sydney) and inner regional areas. This data is for the span of 1 January to 26 September 2021, some nine months period. However, as shown in Table 3, in the three months from 15 December 2021 through to 13 March 2022, case numbers exploded in major city, inner regional, outer regional, and remote regions. Queensland recorded more cases for First Nations People in inner regional, outer regional and remote locations than other states, with SA, NSW and NT following the national trends.

Prior to December 2021 (Report #57), First Nations communities in regional and remote areas in Queensland, were heavily locked down during the initial stages of the outbreak (see for example O’Rourke, 2020). This led to extraordinarily low case rates appearing in these communities, until the lifting of quarantine and border restrictions. It is at that point that the vulnerability of regional and remote First Nations communities is particularly graphically highlighted and this is demonstrated in Figure 2:

Figure 2: PCR confirmed cases and rapid antigen tested cases of COVID-19 among Australian general population compared with Aboriginal and Torres Strait Islander Peoples (26 September 2021 to 13 March 2022) by percentage of population.

As shown in Figure 2 (with the raw data of PCR confirmed cases for Aboriginal and Torres Strait Islander Peoples provided for clarity in Table 4) until the opening of many state borders in December 2021, COVID-19 infection rates for First Nations Peoples across Australia had remained highly controlled.
Table 4: Confirmed cases of COVID-19 among Aboriginal and Torres Strait Islander Peoples, 26 September 2021-13 March 2022

<table>
<thead>
<tr>
<th>Date</th>
<th>ACT</th>
<th>NSW</th>
<th>NT</th>
<th>QLD</th>
<th>SA</th>
<th>TAS</th>
<th>VIC</th>
<th>WA</th>
</tr>
</thead>
<tbody>
<tr>
<td>26/09/2021</td>
<td>42</td>
<td>2,873</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>38</td>
<td>1</td>
</tr>
<tr>
<td>10/10/2021</td>
<td>75</td>
<td>1,181</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>112</td>
<td>0</td>
</tr>
<tr>
<td>24/10/2021</td>
<td>142</td>
<td>2,447</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>503</td>
<td>0</td>
</tr>
<tr>
<td>7/11/2021</td>
<td>170</td>
<td>3288</td>
<td>3</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>1027</td>
<td>0</td>
</tr>
<tr>
<td>21/11/2021</td>
<td>195</td>
<td>3831</td>
<td>34</td>
<td>9</td>
<td>0</td>
<td>1</td>
<td>1354</td>
<td>0</td>
</tr>
<tr>
<td>5/12/2021</td>
<td>195</td>
<td>4011</td>
<td>54</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>1576</td>
<td>0</td>
</tr>
<tr>
<td>16/01/2022</td>
<td>499</td>
<td>14818</td>
<td>269</td>
<td>5379</td>
<td>988</td>
<td>196</td>
<td>4058</td>
<td>2</td>
</tr>
<tr>
<td>13/02/2022</td>
<td>668</td>
<td>16720</td>
<td>433</td>
<td>13970</td>
<td>3738</td>
<td>463</td>
<td>5704</td>
<td>20</td>
</tr>
<tr>
<td>13/03/2022</td>
<td>885</td>
<td>30288</td>
<td>670</td>
<td>16579</td>
<td>5744</td>
<td>652</td>
<td>6500</td>
<td>284</td>
</tr>
<tr>
<td>Totals</td>
<td>2871</td>
<td>79,457</td>
<td>1466</td>
<td>35,959</td>
<td>10471</td>
<td>1,316</td>
<td>20872</td>
<td>307</td>
</tr>
</tbody>
</table>

(Source: Adapted from COVID-19 National Incident Room Surveillance Team, 2021a, 2021b, 2021c, 2021d, 2021e, 2021f, 2022a, 2022b, 2022c)

Evidence indicates that infection rates of the First Nations population, as a percentage, were in line with or slightly above the total population when shown as a representative percentage of population. Most cases were recorded initially in the major urban centres and inner regional locations of NSW, and later in ACT and VIC which also followed the national infection trends. For regional and remote First Nations communities in QLD, NT, SA, TAS and WA the infection rates had been maintained as extremely low with most communities reporting zero cases. However, the December 2021 to January 2022 holiday period saw a dramatic jump in infection rates nationally and therefore an exponential spread of the virus into regional and remote communities throughout the states and territories as shown in Figure 2. When adjusted for potential cases as a percentage of the ‘unknown Indigenous status’ cases (as per Table 1) and adding additional cases that were subsequently reported through rapid antigen testing (RAT) kits, the chart demonstrates a more complete picture of the viral load across Australia.

While the border closures enabled the extraordinary achievement of keeping the rates of infection in regional and remote communities initially low, there were also significant additional costs for these communities. In Queensland for example, many of the remote Cape York communities experienced significant periods of State Government mandated isolation lockdowns as well as federal government imposed emergency Biosecurity Act (AG, 2021) directives, requiring people to remain outside designated remote communities (Minister for Health and Aged Care, 2022).

Individually and in totality, the costs for First Nations communities included:

- income and job losses from the restrictions on tourism and travel (ILO, 2020);
- additional financial burdens due to higher costs of basic goods that were unavailable or difficult to access (Weier & Usher, 2020);
- widespread food insecurity resulting from the health crisis and lack of access to local markets and/or hunting and fishing activities (Fredericks & Bradfield, 2021; Schulze & Yadav, 2021);
- increased lack of social services and support and difficulty in accessing basic PPE (personal protective equipment) (Cord & Pizarro, 2021; Fredericks & Wood, 2017; Schulze & Yadav, 2021);
- lack of access to the informal economy networks, which resulted in lack of access to social protections and increased risks of poverty, social isolation, and potential for mental ill-health (Gray & Hunter, 2017; Schulze & Yadav, 2021); and
- increased lack of access to healthcare, and treatment for mental health issues and social fears due to uncertain border policies and processes (McCann et al., 2022).
The Biosecurity Act’s (AG, 2021) declared travel zones in Queensland mandated restricted travel at the federal level for the local government areas (LGAs) of Aurukun, Burke, Cherbourg, Cook, Doomadgee, Hope Vale, Kowanyama, Lockhart River, Mapoon, Mornington, Napranum, Northern Peninsula Area, Palm Island, Pompuraaw, Torres, Torres Strait Island, Weipa, Woorabinda, Wujal Wujal, and Yarrabah (see Appendix A: Local Government Area Boundaries Queensland for a map of the region). While the Biosecurity Act mandates eventually lapsed on 17 April 2022 (Minister for Health and Aged Care, 2022), Queensland and other states and territories had already begun the process to step down from the restrictions with the support of the state Chief Health Officers (QG, 2020) from June of 2020. For Queensland for example, the Roadmap to easing access restrictions for Queensland’s remote communities (O’Rourke, 2020) enabled the designated communities to transition from the federal government restrictions to state-based arrangements under the CHO’s public health directions.

2.1 GLOBAL PANDEMIC DISASTER MANAGEMENT PLANNING IN FIRST NATIONS COMMUNITIES FOR PREPAREDNESS, RESPONSE AND RECOVERY

2.1.1 World Health Organisation pandemic preparedness strategies

The two strategic objectives of the World Health Organisation (WHO, 2022c) were to:

1. reduce and control the incidence of COVID-19, particularly among vulnerable individuals at risk of severe disease, and
2. prevent, diagnose, and treat COVID-19 to reduce mortality, morbidity, and long-term consequences.

WHO’s 2022 Strategic preparedness, readiness and response plan describes five interacting subsystems (reproduced at Figure 3), integrated horizontally at local, national, and regional levels and vertically between each geographical level of organisation. Further, these subsystems and their connection to each other “must be underpinned by the principles of equity and inclusiveness, with communities at the centre.” (WHO, 2022b, p. 7). Some detail of each subsystem is provided below.

Figure 3: Five core components of COVID-19 preparedness, readiness, and response

(Source: WHO, 2022b, p. 7)
2.1.1.1 Surveillance, laboratories, and public health intelligence

The plan stresses the importance of timely, accurate data and analysis to inform public health responses at local, national, regional, and global levels. The current pandemic was noted to have exposed marked weaknesses in public health intelligence, particularly as many countries are down-scaling COVID-19 testing programs. However, where there are vulnerable populations into which COVID-19 has had less reach and vaccination levels are less than optimal, WHO suggests that more intensive surveillance is maintained in these settings to minimise transmission and morbidity, while aggressively advancing vaccine coverage, particularly amongst the most vulnerable.

2.1.1.2 Vaccination, public health interventions and engaged communities

The WHO recommended a target of 70% of population vaccination rates by mid-2022 (WHO, 2022b) with prioritising full vaccination, including boosters, for those who are clinically vulnerable.

Public health and social measures including quarantine were noted to be resource-intensive and disruptive. Such measures were recommended to be prioritised among the most vulnerable and informed by robust social science information. Further, associated communication initiatives should be tailored to reach all social groups. The need to understand evolving public conversations was stressed to improve both emergency responses and vaccination uptake, particularly to combat misinformation. Recommendations included the use of peer-to-peer approaches and trusted messengers such as health workers and community leaders.

Localised responses were strongly recommended to be co-designed with communities through thorough community engagement to ensure relevance, acceptability, sustainability, and effectiveness.

2.1.1.3 Safe and scalable clinical care and resilient health systems

Rapid translation of available evidence to inform assessment and management of COVID-19 across all stages of the disease continuum and readiness of health care systems to respond, are considered essential. This readiness includes integrated clinical pathways, strengthened local health workforces, and access to sufficient medical equipment such as oxygen and respiratory assistance equipment. The pandemic has shown to have direct and indirect impacts on mental health, coinciding with considerable disruptions to already under-resourced mental health services globally (Panchal et al., 2021; WHO, 2020a). WHO recommended that urgent efforts were made to ensure better availability of these services to all communities.

2.1.1.4 Research, development, and equitable access to countermeasures and essential supplies

The introduction of globally available COVID-19 vaccine has been extremely rapid (Organisation for Economic Co-operation and Development [OECD], 2021, 18 March). However, many countries are struggling to achieve high uptake, particularly among people living in poverty, those with lower levels of education and health literacy, and those who have poor access to health services. Foundational intervention areas to encourage uptake are:

» community engagement;
» communication and education especially to address misinformation; and
» service quality enhancement and supportive policies such as incentives and onsite vaccination availability (WHO, 2022b).

Vaccination is regarded as key to ending the acute phase of the current and future pandemics. There is also a need for improved quality of surveillance data, rapidly analysed to inform policy adjustments. Research is seen as imperative to inform pandemic preparedness and response, including non-epidemiological data. Research needs to investigate and report on behavioural science evidence that takes into account local cultural contexts and informs public health campaigns. Identified research priorities include (WHO, 2022b):

» public health and social measures and their impact;
WHO collated these strategies into a new model of pandemic preparedness, readiness and response coordination that is evidence-based and involved multi-partner mechanisms, reproduced in Figure 4:

**Figure 4: A new model of integrated respiratory disease prevention, surveillance, and care (WHO)**

2.1.2 United Nations pandemic disaster management planning in First Nations communities for preparedness, response, and recovery

COVID-19 pandemic considerations described by the United Nations Organisation (UN) urged that governments and representative institutions include Indigenous Peoples’ representatives, leaders, and traditional authorities in both emergency management and health decision-making – having regard to and in respect for the right to self-determination. Specific recommendations included:

- ensuring the availability of disaggregated data;
- including rates of infection, mortality, economic impacts, care burden and incidence of violence;
- preparation of appropriately targeted public service announcements;
- improvement of information technology and other infrastructure to ensure access to both information for communities and education for children and youth through remote learning; and
- provision of support to people subject to lockdowns or other restrictions to prevent the spread of COVID-19 in their communities.

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A further recommendation is that consideration be given to the establishment of post-COVID-19 reconstruction funds and public resources in order to support and re-establish traditional livelihoods and economies to ensure sustainability of First Nations communities (UNDESA, 2020).

Given the uniqueness of different Indigenous groups, and acknowledgement of the importance of Indigenous knowledges, values and cultures as risk-reduction tools, the Pan American Health Organisation (PAHO, 2019) described steps to ensure effective engagement with Indigenous Peoples in health disaster management which include:

» in-depth understanding of the target population, gained through community participation
» identification of key health disaster management stakeholders at the community level and clear definition of roles and responsibilities
» identification of, and collaboration with, key community leaders, influencers, and decision-makers (including youth leaders, women's groups, and elders)
» continuous dialogue and advocacy between local governments and external stakeholders.

2.1.3 Sendai Framework for Disaster Risk Reduction 2015-2030

The Sendai Framework for Disaster Risk Reduction 2015-2030 (UNDRR, 2015, p. 12) seeks to guide the multi-hazard management of disaster risk in development at all levels as well as within and across all sectors – global, national, state and local. The primary goal of the Framework is to:

Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience.5

Figure 5 illustrates the seven targets and four priorities for action to be achieved between 2015 and 2030 as proposed by the Framework:

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5 As used throughout the Sendai Framework, "resilience" is defined as: “The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management,” United Nations Office for Disaster Risk Reduction (UNDRR). (2020-2022). Terminology on Disaster Risk Reduction: Resilience. Retrieved 20 October, 2022 from https://www.undrr.org/terminology/resilience.
Based on these targets and priorities, the principal outcomes from global implementation of the Sendai Framework are substantial reductions in disaster risk and loss of life. The Framework seeks to ensure that individuals, communities, and countries can maintain their health, businesses, livelihoods, economic, physical, social, and cultural environments, and strives to strengthen global co-operation between countries to reduce disaster risks (UNDRR, 2015). The four priority areas urge individuals, governments, and communities to coordinate efforts and encompass both broad (global and national) and narrow (local and regional) stakeholder engagement as the means of reaching the targets.

The Sendai Framework, however, focuses particularly on the reduction of risks from natural hazards (e.g., cyclones/typhoons, earthquakes, and other climate change events). While there is mention of health as a component of critical infrastructure, the Framework is not equally detailed in relation to pandemics and the ways in which pandemic disaster risk preparedness, management, and responses are to be handled and/or integrated into country or community level planning. As noted by Wahlström (2015), disaster risk needs to be understood from all dimensions including vulnerabilities, capacities and the potential for exposure of peoples and assets to the disaster; characteristics of the risks; and the environments in which these disasters take place.

### 2.2 AUSTRALIA’S DISASTER MANAGEMENT PLANNING FRAMEWORK

The Sendai Framework was adopted in Australia and by other members of the United Nations in 2015 at the third United Nations World Conference in Sendai, Japan. Australia’s “National Disaster Risk Reduction Framework” (AGDoHA, 2018) aligns with concepts set out in the Sendai Framework and details national policy settings for reducing disaster risk (Portillo-Castro, 2019). Based on the national level planning framework, states and territories in Australia have developed regional and local disaster management plans (LDMPs) through collaboration with various state and territory emergency and disaster management organisations. These plans are informed by risk assessments relevant at the local, district and state or territory levels. Figure 6 provides an overview of the national, state, regional, and local-level disaster response, management, and recovery arrangements. This figure has been developed from the national framework (AGDoHA, 2018) and incorporates the disaster management (DM) planning and recovery mechanisms across all states and territories to provide an integrated, whole-of-government view. While there are some state and territory differences in the procedures and/or governance arrangements, essentially the state, territory and local structures are based on the federal policy outlines.
Figure 6: Australia’s disaster management planning framework

The Sendai Framework (UNDRR, 2015) recommends inclusion of First Nations IKP in national, state, district and local disaster management plans, policies, and strategies to complement scientific knowledge in disaster prevention, preparation, response, and recovery (PPRR).

2.2.1 Australian pandemic disaster management planning in First Nations Communities for prevention, preparedness, response, and recovery

As previously mentioned, the National Aboriginal and Torres Strait Islander Advisory Group on COVID-19 was established in March 2020 (NACCHO, 2022). Key roles of this group include the development and implementation of the Management Plan for Aboriginal and Torres Strait Islander populations, which supports the Australian Health Sector Emergency Response Plan for Novel Coronavirus (COVID-19) (AGDoHA, 2020). The plan has a focus on clinical and public health actions and responses, with emphasis on effective communication and social determinants of health. The two-part plan includes: an overview of the approach to COVID-19, outlining guiding principles, context, key issues and targeted actions that are required to underpin engagement with Australian First Nation Peoples; and an operational plan directed at health care professionals working to support the development and implementation of local operational plans. Principles adopted in the development of the plan include:

- shared decision-making between Governments and Aboriginal and Torres Strait Islander Peoples;
- community control as expressed through the Aboriginal and Torres Strait Islander Community Controlled Health Sector;
- cultural safety and equity across the whole-of-population health care system; and
- data and evidence to inform responses that are inclusive of Aboriginal and Torres Strait Islander knowledge.
Underpinning the plan is the philosophy that developing approaches to COVID-19 responses must be based upon the self-determination of Aboriginal and Torres Strait Islander Peoples as proposed under current international agreements.

2.3 SUMMARY

Regional and remote communities experience numerous and varied risks and inequalities in terms of health care and disaster management (O’Sullivan et al., 2020). This is directly related to their remote or isolated geographical locations and, when combined with significant population disadvantages including generally low socio-economic status, and poor access to health and infrastructure, often leads to overwhelming pandemic prevention or management challenges. It is essential that policy and strategic thinking around pandemic preparation, management and response recognise and deliver on these inequalities in the first instance. Resourcing and support strategies need to be tailored to community geo-social contexts and the levels of risk and resilience that are available in communities to ensure appropriate and effective responses to pandemic surge events.

The following sections of this report provide further detail on the research program that was undertaken to investigate the two research questions as noted in Section 1.2. Following the research design framework:

- section 3 details the reviews of literature;
- section 4 provides the findings from the desktop analysis of the LDMPs that covered 82 local government areas across Australia;
- section 5 outlines the findings from the key stakeholder and community interviews;
- section 6 provides the synthesis and discussion of all the findings; and
- sections 7, 8 and 9 provide the recommendations, policy implications and dissemination strategy that needs to be implemented to begin the change process and ensure translation of research to knowledge.

3 LITERATURE REVIEW

As a result of the research questions and issues to be addressed, the literature review had two key aims:

1. To examine the implementation of local disaster management planning in regional and remote First Nations Communities as a result of the COVID-19 pandemic; and
2. To examine how health promotion information has informed preparedness, response, and recovery in regional and remote First Nations Communities as a result of the COVID-19 pandemic.

3.1 REVIEW METHODOLOGY

To facilitate the coverage of these two divergent but interrelated aims, the review was carried out in two stages.

- **Stage 1:** Initially the research team sought a broad overview of the current state of knowledge on First Nations Peoples’ engagement with, and responses to, pandemics to provide an overall context for the study. Using a narrative approach, this review examined literature from global and national (Australian) research evidence. We sought to identify the outcomes, issues, and challenges for First Nations communities based on research evidence worldwide, and then more narrowly investigated the current state of research for First Nations communities within Australian contexts. This review process provided the background and contextual information for this study (section 2).

- **Stage 2:** Based on this contextual knowledge set, the research team sought to dive more deeply into each of the study’s key research question areas, engaging in the reviews of literature for Question 1 based on disaster management in First Nations communities (DMFNC), and Question 2 based on health promotion in
First Nations communities (HPFNC). Specifically, for Question 1 the team investigated the literature and state of evidence relating to disaster management planning, implementation, responses, and efficacy for regional and remote First Nations communities in Australia (DMFNC). The research team then investigated the development, implementation, and use of health promotion information by or within First Nations communities to evaluate its efficacy and effectiveness (HPFNC) for research Question 2.

The completed review contained within this report, is a major piece of meta-research on the topic and therefore provides a significant contribution to the state of global and Australian knowledge on pandemic challenges and management for First Nations Peoples and communities.

3.1.1 Rapid review approach incorporating a semi-systematic process

Given the broad nature of the literature review aims, the methodology undertaken for this project required a similarly expansive approach but that was also restricted by the time and resources available. Therefore, the team adopted a rapid review approach (Grant & Booth, 2009) incorporating a semi-systematic process (Snyder, 2019). A rapid review of available literature has the potential to offset a principal challenge for the use of the systematic review as a provider of effective research evidence in decision-making (Crowther et al., 2010). A systematic review requires researcher time, and the significant capacity to accurately and narrowly define the study parameters. A rapid review, on the other hand, has the disadvantage of a lack of dedicated researcher attention (Haby et al., 2016), but enables a timely and relevant search of current literature to inform the overall research design.

Rapid reviews to evaluate research evidence often involve several modifications to the systematic review process. In this way, rapid reviews provide evidence for decision-making earlier than fully systematic reviews yet retain a rigorous process to cover a substantial range of literature. As Haby et al. (2016) noted, such modifications to the standardised systematic review process can include:

- developing tightly-targeted research questions to reduce the scope;
- reducing the list of sources being searched and/or limiting sources to the selection of more specialised materials considered pertinent to the topic;
- searching for articles in only the principal language of the study team (e.g., English);
- reducing the timeframe for the review search;
- potentially excluding alternate sources such as ‘grey’ literature;
- using software or other automated methods to conduct some/much of the selection process; and
- using a limited number of the research team members to conduct the review, enabling others to undertake other study tasks.

3.2 SEARCH STRATEGY

Given the recency and primacy of the information being sought, the primary search strategy used for this review comprised extensive use of Google Scholar Advanced Searching to locate and select material in the field, and then follow-up searches were conducted of a selection of scholarly databases. These databases and other grey literature sources included: the Directory of Open Access Journals (DOAJ); Science Direct; PubMed; Informit; the Department of Health and Aged Care (epidemiology reports)’ and the Australian Disaster Resilience Knowledge Hub.

In the initial Google Scholar Advanced Searches both systematic literature reviews and primary studies were canvassed. An overview of the search strategy is provided in Figure 7 for disaster management (DMFNC) and Figure 8 for health promotion (HPFNC).
3.2.1 Screening and selection of papers for inclusion or exclusion

In line with several of the modifications for systematic reviews as previously discussed, this semi-systematic, rapid review followed the process below:

- Searches were conducted and screened according to the selection criteria by one review author. The reviewer sought to ensure that papers were included initially on a very broad scale to gain a wide cross-section of information available and ensure that as many potentially relevant publications as possible could be examined within the time and resource constraints.

- Where search results returned numbers of papers too great to be effectively screened (>300) within the constraints of the study, the most relevant 10% of papers was selected based on the pages returned by the Google Scholar Advanced Search.

- The titles, Google Scholar text extractions, key words and other information provided from the initial searches were then thematically coded to establish broad themes within the articles for grouping and to further refine the focus of future searches to target papers of specific relevance to the study (see Appendix B: Qualitative Coding Pivot Tables for Literature Reviews Based on Primary Codes).

- Abstracts were then collected and further screened for significance and relevance to the stated review aims/topics. This also allowed for refinement of the initial thematic codes. From these potentially relevant papers, full texts were retrieved for closer examination.

- A number of grey databases specific to the study were also searched to ensure all existing and available literature was located (Page et al., 2021). Grey databases searched for this review included: Australian
3.2.2 Inclusion criteria

The research team followed a logical progression of seeking broad-based information and then refining that down to examine the most appropriate sources. Key inclusion criteria comprised peer-reviewed academic research, published in English, from 2018 to 2022. These parameters where then further refined using additional Boolean key words as shown in Figure 7.

Search 1 of the DMFNC searches, for example, specifically sought for review articles and search terms included: Indigenous, pandemic, Australia, either rural OR remote. Searches 2, 3 and 4 for DMFNC literature then refined the search parameters to encompass any type of pages and search terms were further added including: COVID-19, socio-economic, NOT medicine, pandemic management, and risk management. Following Google search processes, the use of inverted commas around search terms ensures these exact terms are included. The use of the terms ‘OR’ and ‘NOT’ following Boolean practice allows the searches to include or avoid specific terms. Therefore, the use of ‘NOT’ sought to avoid pages that are particularly focused on medical issues.

For the health promotion review search (HPFNC – Figure 8), the process was again further refined but followed the same Google Scholar Advanced Search processes as established for the DMFNC searches.

The HPFNC review sought to focus the searches specifically on health promotion and health messaging pertinent to pandemic and/or COVID-19 specifically for Aboriginal and/or Torres Strait Islander Peoples. Papers and sources were again sought incorporating the same broad key inclusion criteria as for the DMFNC searches, comprising peer-reviewed academic research, published in English, but with a much more confined period of only 2022. This was further refined to concentrate on COVID-19 health promotion, individual and community engagement, and reported outcomes, in regional and remote First Nations communities. Research on the subject of First Nations public health initiatives, and reported outcomes, related to either the 2009 H1N109 pandemic and/or the COVID-19 pandemic were included in this review.

Grey literature comprised federal, state and territory government reports, papers, and policy or strategy documents on disaster management and health promotion, health promotion materials, as well as research published in other white papers or discussion papers, news articles and press releases, and a variety of disaster management and community health initiatives from First Nations organisations, published and available online.

3.2.3 Exclusion criteria

As noted in Figure 7 and Figure 8, exclusion criteria included: duplicate records, irrelevant research focus (such as medical, co-morbidity studies), unrelated research contexts, articles published prior to either 2018 (for DMFNC) or 2022 (for HPFNC), and articles in languages other than English. Successive Advanced Google Scholar searches were then refined based on the qualitative coding process, moving from primary- to secondary- and tertiary-level open coding.
3.3 LITERATURE REVIEW QUESTION 1: PANDEMIC DISASTER PREPAREDNESS, MANAGEMENT, RESPONSES AND RECOVERY FOR FIRST NATIONS COMMUNITIES (DMFNC)

The review of literature specifically pertaining to disaster preparedness, management, responses, recovery, and resilience of First Nations communities, covered a great deal of disparate literature. Papers were screened and reviewed from across discipline areas such as:

- medical, public health, mental health, and epidemiology
- data sources, digital challenges, and digital capabilities
- natural and environmental disaster research
- policy documents and legislation, policy briefings, opinion papers, white papers, and other government and non-governmental (non-profit organisation) documents
- preparedness, risk, and resilience literature
- cultural, social, and economic impacts literature.

After the initial selection of papers based on inclusion criteria (e.g., as shown in Search 1 for DMFNC, 1,430 articles were returned, of which 10% were selected (n=143)), screening and ‘open coding’ (Charmaz, 2000) of titles and Google search terms was then undertaken. Where papers were considered to be ‘irrelevant’ or duplicates these were excluded, and abstracts were sought for the remaining articles for further screening and qualitative coding (Search 1 DMFNC, n=57). Article abstracts were then reviewed, and further qualitative coding was undertaken with codes developed from the article topics or findings as reported in the abstracts. Final articles were then selected for inclusion in the study (Search 1 DMFNC, n=30).

Qualitative coding developed primary, secondary, and tertiary level codes as shown in Appendix B: Qualitative Coding Pivot Tables for Literature Reviews Based on Primary Codes. The codes were then collated, and raw counts were investigated through pivot tables. Where articles were categorised in the primary coding as irrelevant (n=326, Table 10) or duplicate record (n=17) these were excluded. A further 78 total papers were subsequently coded as irrelevant in the secondary (n=53) and tertiary (n=25) coding rounds due to the focus of the articles being on unrelated research topics such as:

- co-morbidities (n=18),
- digital responses or digital capacity e.g., telehealth and telehealth applications (n=11),
- mental health (n=5), and
- food security or insecurity (n=4).

Of the remainder, the primary codes were then used to distil, aggregate, and integrate the data. A total of 108 articles from the DMFNC literature search were subsequently selected for full review.

Approximately 37% of the articles retrieved discussed international conditions for pandemic challenges (i.e., the general global situation) and/or conditions for other locations such as Canada, New Zealand and the Pacific Nations, and Europe (n=40); while nearly 43% of the papers focused on Australian (national) or regional locations (n=46). The remainder were non-specific in terms of location of the study with a number being literature review papers or other desktop studies and opinion papers.

The key themes to arise from the papers selected for review were grouped around the following codes:

- challenges (n=15) and impacts (n=18)
- health challenges, policy, promotion and barriers to healthcare (n=28) and public health/compliance (n=8)
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» pandemic management and political responses to pandemics (n=27)
» vaccine and vaccinations (n=5) and culturally relevant health responses (n=9)
» preparedness (n=9) and risks, risk assessment and management (n=6)
» responses to pandemic management (n=7) and remote Indigenous community strategies (n=12)
» mental health and social and emotional wellbeing (n=17).

(NB: As papers were cross coded with up to three (or more) qualitative codes, numbers of papers does not add up to the total of 108. They are therefore only provided here as a guide to demonstrate the comparative significance of the theme).

These key themes then traversed a range of other sub-themes, and these are discussed below.

3.3.1 Challenges, issues, and impacts of COVID-19 and pandemics

Researchers and other sources reported the challenges, impacts, and/or issues arising from COVID-19 and other pandemics for First Nations communities. The principal findings included:

» Negotiating border closures and Biosecurity Act ‘bubbles’ and the resulting political, physical, emotional, and financial challenges (Kerrigan et al., 2021; McCann et al., 2022; T. Power et al., 2020; Smith et al., 2020), including food security/insecurity due to lack of access and higher prices (Fredericks & Bradfield, 2021; T. Power et al., 2020).
» Lack of opportunities for self-determination due to lockdowns and stringent public health measures (Fredericks & Bradfield, 2021) including the extent and quality of contact tracing activities and staff (World Health Organisation [WHO], 2020b).
» Immediate and longer-term impacts on Indigenous labour markets and businesses due to rapid structural and macroeconomic fluctuations and the resultant policy changes (Dinku et al., 2020).
» Ongoing challenges with decolonisation of agencies and structures including enduring systemic social disadvantage, colonisation/colonialism, and racism (Abimbola et al., 2021; Furlong & Finnie, 2020; Kerrigan et al., 2021).
» Ongoing pandemic risk management challenges including the need for scaling-up of global economic responses to pandemics and pandemic management (Schultz, 2020). The COVID-19 pandemic has raised a “perfect storm” (CPA Australia ESG Centre of Excellence [CPA], 2020, August, p. 3) of risks to businesses and global economies with key risks being disruptions to operations, financial challenges, and employee health and productivity over the long term. The World Economic Forum (2020, p. 8) suggested there needs to be four areas of action globally of offset pandemic risk challenges into the future including:
  a) “reviving and transforming” the enabling environments of technology and digitalisation;
  b) scaling-up systems and actively engaging new policies for upskilling and retraining human capital to deliver on new labour market opportunities and increase health systems capacities;
  c) ensuring stability in global financial markets and incentivise organisations to develop resilient international supply chains; and
  d) expanding research and development to ensure inclusive innovation ecosystems to support entrepreneurial culture and creation of new enterprises.
» Unequal social, economic and environmental impacts from COVID-19 due to regionality and remoteness, economic reliance on tourism (Babacan et al., 2020, September) or agricultural workforces, distribution chain vulnerabilities, and ongoing supply chain constraints (Papadimos et al., 2020) were all reported as continuing to present significant challenges for communities as they emerge from COVID-19 restrictions.
» Ongoing gaps in the relationships between First Nations Peoples and governments that continue to be highlighted in poor social and economic outcomes and ongoing health inequity (Markham et al., 2020).
3.3.2 Health challenges and barriers to health care

Given the nature and widespread impact of the pandemic globally, health care challenges and ongoing issues arose as a key finding in the literature such that there was:

- **Persistent inequity in health services** including lack of access to high-quality primary health care (PHC) (Demaio, 2021) and PHC systems that are not well-resourced to manage crisis events (McCalman et al., 2021).

- **Ongoing challenges for primary health care provision** through reliance on short-term (fly-in/out or drive-in/out) health workforce (Fitts et al., 2021), the provision of culturally appropriate health care (Lakhani, 2021), and providing adequate training for intervention staff (Sebastian et al., 2022).

- **Emotional and mental health and wellbeing** for health workers and other frontline staff was reported as representing a significant burden arising from the pandemic. Further, the effects of social distancing, isolation, lockdowns and quarantine on community members (Furlong & Finnie, 2020; Mari et al., 2021; Smith et al., 2020) will continue to present significant challenges for health care providers and communities.

- **Managing co-morbidities and the fear of COVID-19** and the impacts of pandemics in relation to underlying chronic conditions (Kerrigan et al., 2021) was a significant component of health care provision and messaging and required staff, time, and careful communication activities.

- **Other barriers to health care** such as transport and accessibility issues, socio-economic conditions and social vulnerability (Mamelund et al., 2021), ethnicity and racism, and the variety of patient social and cultural characteristics (Shukla et al., 2020) were well highlighted in the literature.

- **Indirect impacts on health resulting from missed, delayed or avoided health care** due to concerns over COVID-19 (Follent et al., 2021) may represent longer-term health and community impacts.

- **Compliance with public health directives** requiring willingness of people to participate (Khorram-Manesh et al., 2021), good health literacy, and appropriate communication and policy measures to affect behaviour changes (Lee et al., 2021) will require reviewing and developing health policies and communication strategies going forward.

3.3.3 Pandemic management lessons, strategies, and policy development opportunities

Of the selected papers reviewed, a thematic grouping occurred around the qualitative code ‘pandemic management’. Secondary and tertiary coding of these articles showed significant diversity in the papers in terms of their varied discussions. However, when integrated and categorised, the results from research to date focus on ways in which COVID-19 and pandemic disaster management represents significant challenges for communities, governments, and businesses. There are also a number of learnings that need to be processed and utilised to ensure more effective management. The following provides an overview of the results:

- **Health policy development for effective pandemic management** requires understanding the lessons that have been learned globally and nationally (Tue Anh et al., 2020) including:
  a) undertaking border closures and community lockdowns early in the crisis;
  b) developing and using digital mechanisms including free-of-charge telehealth and virtual hospital options (Duckett, 2020) for regional and remote health care; and
  c) adopting digitally enhanced contact tracing through smartphone apps (Mbunge, 2020; WHO, 2020b).
The nexus involving political motivation, scientific and other expert opinions for actions, and policy development for pandemic and other (i.e., natural) disaster management (Gluckman & Bardsley, 2021) is complex and may produce conflicts and tensions between these differing philosophies. The different domains have responsibilities in both intervention and prevention of disaster risks. However, there are also costs versus benefits outcomes of various decisions to consider, and these outcomes may preclude developing effective resilience strategies in advance of the next disaster (Gluckman & Bardsley, 2021).

Partnering with First Nations leaders and communities needs to be more widely adopted to develop culturally appropriate and acceptable models for engagement, community empowerment, identifying barriers to disease control implementation, and understanding how to reduce risks to families through co-developed, flexible models of health care (Crooks et al., 2018).

Understanding and planning for important events in pandemic crisis management for First Nations communities, needs to be supported and facilitated by governments in preparation for the future (Dudgeon et al., 2022). This planning needs to ensure there is appropriate and adequate data collection, monitoring and continuing surveillance and identification of health impacts for Aboriginal and Torres Strait Islander Peoples in regional and remote communities (Griffiths et al., 2021).

Misinformation and myths being propagated on social media including that: “Aboriginal Peoples are immune”; “heat kills the virus so people in Australia’s tropical north are immune”; and that “the disease had been unleashed to kill Aboriginal peoples” (Kerrigan et al., 2021, p. 203) and other incorrect information (see for example Aboriginal Health and Medical Research Council of NSW [AH&MRC], 2019) were significant threats to achieving public health compliance and combatting the disease spread. Other misinformation was promulgated more widely including pseudoscience and the use of inappropriate pharmacological and nonpharmacological interventions (Papadimos et al., 2020). Effective public health outcomes were further confounded by intergovernmental conflicts (both nationally and internationally) and government actions that essentially undermined other governments’ approaches (Wang & Weinstein-Tull, 2021). Together the application of myths and misinformation represent significant challenges to effective prevention or intervention in pandemic management.

Risk perceptions and the related behavioural responses from individuals and communities demonstrate that there is a changing relationship between these two aspects as to how people weigh the risk against their protective responses over time (Qin et al., 2021). The perception of risk and its relationship to behavioural changes needs to be much better understood and monitored particularly in relation to First Nations communities for improved, culturally appropriate (Boyd & Buchwald, 2022) pandemic management processes.

Vaccines and vaccinations are seen as the principal means of combatting COVID-19 and future pandemics. Research shows that communities are not averse to prioritising higher risk populations above general populations (Degeling et al., 2021). However, stigma mitigation strategies need to be employed particularly for First Nations communities (Ward & MacDonald, 2021). Further clear, ethically-defendable, well communicated, and flexible objectives need to be developed to implement vaccination regimens to support community engagement and communication needs (Fielding et al., 2021).

3.3.4 Challenges of vaccine and vaccination acceptance and delivery

While the issue of vaccination has already been mentioned as a principal strategy within the category of ‘pandemic management’ above, due to the prevalence of literature on the variety of vaccination and vaccine development topics, the theme also requires separate discussion. The key findings are summarised as follows:

Development and rollout of a viable, socially acceptable vaccine was seen to be an entirely government-led approach to COVID-19 suppression (Choiseul et al., 2021). Strategies need to be clearly developed to
ensure that lessons learned during the early stages of the crisis are put into practice; vaccination development and rollout must be done rapidly and with good engagement with communities (Degeling et al., 2021).

» **The scale of misinformation and fear of the vaccination rollout globally** requires specific mention as a key challenge of COVID-19 (Fredericks et al., 2022) and potentially other future pandemic interventions (Fielding et al., 2021). The WHO (2022a) coined the term ‘infodemic’ to encapsulate the capacity of false or misleading information to create harmful behavioural responses that arose during the disease outbreak. Infodemic management requires:
  a) engaging with, and listening to, communities;
  b) promoting understanding of the risks and health advice;
  c) building resilience to misinformation; and
  d) empowering communities to take positive, protective actions (World Health Organisation [WHO], 2022a).

» It is **imperative to develop better understanding of the mechanisms and tools for effective communication and communication strategies to ensure successful vaccine uptake** and to safeguard long-term community relationships with health services (Baral, 2021).

### 3.3.5 Preparedness and community-based responses to pandemic management

The qualitative theme of preparedness and community-based or community-led responses to support better pandemic management emerged with the integration of several qualitative codes. When integrated and analysed, the reviewed paper topics covered preparedness issues, engagement, community-based approaches, health policy development, resilience, planning, risk management/assessment, and health systems and service preparedness. In discussions particularly focused on First Nations communities, there is also specific note of the need for culturally relevant engagement and inclusion of cultural practices. The summary of key findings under this thematic category are a set of learnings for future preparedness.

» **National, regional and local-level preparation for careful and effective recovery planning** requires thorough stakeholder engagement (Chiam et al., 2022) that centres on vulnerable and isolated communities and peoples, and particularly women and community leaders.

» **Health policy development and ongoing research in collaboration with First Nations Peoples** is required to ensure there is active engagement with pandemic preparedness, response and management (Crooks et al., 2020).

» **Risk management and early assessment are required for effective pandemic preparedness** and response (O’Sullivan et al., 2020). Pandemic situations represent significant risks to health systems, communities and PHC teams. New thinking needs to suggest ways to develop more flexible and responsive resources to maximise health care potential and develop more resilient communities for surge events.

» **Planning for preparedness** needs to consider at-risk populations, the intended end-user of the plan, the needs of First Nations populations in terms of pharmacological and co-morbidity challenges, ensuring that there is sufficient guidance about the dimensions and level of the pandemic (Itzwerth et al., 2018).

» **Governments need to carefully consider future policy and legislation**, initiate and develop capacity building opportunities for communities, and build strong, integral, cultures within communities along with implementation of e-governance structures to ensure effective responsiveness and recovery (Bakam et al., 2022).
3.3.6 Mental health and social and emotional wellbeing

Aboriginal and Torres Strait Islander Peoples across Australia experience significantly higher rates of mental health issues than non-Indigenous Australians, and suffer double the rate of deaths from suicides as a result (Dudgeon, Boe, et al., 2020). There is high and increasing need for adoption of the “Social and Emotional Wellbeing Framework” (Gee et al., 2014) to support Australian First Nations communities’ mental health and social wellbeing. Apart from this, as a direct result of COVID-19 lockdowns and social and emotional distancing protocols, there may be a wide range of other impacts on mental health and wellbeing including:

- **Potential increases in anxiety, depression, alcohol and drug dependency, and post-traumatic stress syndromes may present significant tolls on individuals and families** as has been shown to occur based on evidence from previous large natural disasters and pandemics (Group of Eight Australia [Go8], 2020). This indicates that mental health challenges will continue throughout the recovery phase of the pandemic.

- **There may be other long-term psychological impacts from lockdowns during the COVID-19 pandemic** including the extent to which people trust institutions (such as police and health services), governments, and science and the perceptions of risk from the virus (Sibley et al., 2020). The costs arising from the pandemic virus may be not only physical and financial but also psychological due to fear, loneliness, and restrictions on personal liberties. Successful pandemic disaster management requires individuals to voluntarily process information and comply with advice from scientists, politicians, and law enforcement. This complicated response process requires individuals and communities to trust and comply with directives, and trust may be eroded overtime. Indigenous nurses were found to provide excellent leadership and were highly trusted advocates for effective First Nations community health responses (Clark et al., 2021).

- Further, **perceptions and behaviours of communities were found to differ depending on geographical remoteness**. For example, one Australian study of 677 participants (Argus et al., 2022) found that while all participants were supportive of the Australian Government COVID-19 measures (e.g., social distancing, testing, and isolation measures), it was noted that the more regional and remote communities felt that the restrictions were too strict for their communities. Participants who were more geographically remote perceived they were safer when leaving their house than urban participants (Argus et al., 2022). In terms of overall psychological impacts and trust of governments and police, policy makers need to be aware of community perceptions in relation to health behaviour compliance and ensure strong communication and messaging for regional and remote communities.

- The potential psychological and behavioural impacts arising from COVID-19 are strongly influenced by the local community situation (McLeod et al., 2019). In other than very general circumstances, **behaviours expected from one community cannot easily be extrapolated to others** (Kendrick & Isaac, 2021; Krishnamoorthy et al., 2020). Governments and clinicians should be led by local data, local people (Clark et al., 2021), and local social and cultural contexts; ensuring that expected health and compliance responses are embedded within cultures (Kendrick & Isaac, 2021).

3.3.7 Summary of literature review for question 1

3.3.7.1 Key themes and sub-themes

The review of literature pertaining to research Question 1 identified six key themes and a range of related sub-themes:

1. Major challenges, issues and impacts of pandemics include:
   - negotiating border closures and biosecurity bubbles
   - lack of opportunities for self-determination due to lockdowns and stringent public health measures
   - immediate and longer-term impacts on Indigenous labour markets and businesses
ongoing challenges with decolonisation of agencies and structures
ongoing pandemic risk management challenges
unequal social and environmental impacts from COVID-19 due to regionality and remoteness
ongoing gaps in the relationship between First Nations Peoples and governments

2. Significant health challenges and barriers to health care include:
   - persistent inequality to health services
   - ongoing challenges for PHC provision including reliance on short-term health workforce and provision of culturally appropriate health care;
   - other barriers to health care such as transport and accessibility issues, socio-economic conditions and social vulnerability, ethnicity and racism;
   - emotional and mental wellbeing of frontline staff and managing effects of stringent public health measures on community members;
   - management of co-morbidities and fear of COVID-19; and
   - indirect impacts on health arising from missed, delayed or avoided health care.

3. Key pandemic management lessons, strategies, and policy development opportunities included:
   - health policy development for effective pandemic management using the lessons that have been learned globally and nationally
   - understanding and managing the nexus of political motivation, scientific and expert opinion to produce better policy development for pandemic and other disaster management
   - adoption of partnering with First Nations leaders and communities
   - understanding and planning for important events in pandemic crisis management for First Nations communities
   - developing strategies to manage and overcome misinformation and myths propagated through social media and other channels
   - developing better understanding of individual and community risk perceptions and the related behavioural responses to achieve appropriate pandemic behavioural change
   - develop flexible objectives to implement vaccination regimens to support community engagement and communication needs over the long-term

4. Key challenges of vaccine development and vaccination acceptance and delivery included:
   - development and rollout of viable, socially acceptable vaccines
   - the scale of misinformation and fear of the vaccination rollout globally
   - the necessity to develop better understanding of the mechanisms and tools for effective communication and communication strategies to ensure successful vaccine uptake

5. Preparedness and community-based responses to pandemic management showed need to:
   - Develop national, regional and local-level preparation and recovery planning using thorough stakeholder engagement that centres on vulnerable and isolated communities and peoples, and particularly women and community leaders.
   - Develop health policy through long-term research in collaboration with First Nations Peoples.
   - Ensure risk management and early assessment for effective preparedness and response to maximise health care potential and develop more resilient communities for surge events.
   - Consider at-risk populations, the intended end-user of the plan, the needs of First Nations populations in terms of pharmacological and co-morbidity challenges, and that there is sufficient guidance for communities

6. Mental health and social and emotional wellbeing challenges include:
Potential increases in anxiety, depression, alcohol and drug dependency, and post-traumatic stress syndromes and other mental health challenges that will continue throughout the recovery phase of the pandemic.

Significant long-term psychological impacts from lockdowns during the COVID-19 pandemic.

Noteworthy differences in health and mental health perceptions and behaviours of more regional and remote communities require policy makers to be aware of community perceptions in relation to health behaviour compliance.

The potential psychological and behavioural impacts arising from COVID-19 are strongly influenced by the local community situation and cannot easily be extrapolated to other communities.

3.3.7.2 Essential take-away messages

While the above review of literature on the pandemic disaster management in First Nations communities has highlighted a range of challenges, issues, preparedness and response learnings, and ongoing challenges post-COVID-19, there are a few very clear points that must be taken into account moving forward.

1. First Nations and regional and remote communities, are exceedingly exposed to the devastating effects of COVID-19 due to a number of factors including domestic overcrowding, an elevated burden of co-morbidities, and poor access to health care and infrastructure (Hengel et al., 2021). Crisis events, such as global pandemics, reveal significant disparities in social and economic experiences between and within communities – i.e., social cohesion (Jewett et al., 2021). The resultant deficits that are highlighted are subsequently exacerbated by the crisis events creating a downward spiral for community resilience and increased impacts on community sustainability. National, regional, and local government pandemic recovery planning requires careful and extensive stakeholder engagement before, during and after these events to strengthen and ensure community resilience over the longer term. Access to better COVID-19 testing and care is required for remote communities, and this may necessitate a new, decentralised model of political and clinical responses that are culturally responsive. Policies need to be developed and/or revised that are adjusted to deliver within communities specific, cultural, social and economic frameworks (Ibanez & Sisodia, 2022).

2. Further, there is growing evidence that the health and wellbeing of First Nations Peoples is strongly influenced by their cultural embeddedness (Bourke et al., 2018). As reported by Bourke et al. (2018), First Nations Australians and other Indigenous populations globally define health in holistic terms including spiritual, physical, and social aspects well beyond a simple biomedical description. Domains such as connection to country, language, cultural expression, connection to family, and self-determination (among others) are identified as providing positive health outcomes.

3. Additional research and evidence-based action needs to occur to support communities in future – both within the long-tail of the current COVID-19 pandemic and in preparation for future pandemics and health disasters. The impacts from pandemics generally, and COVID-19 specifically, are persistent, widespread, and will continue to negatively affect First Nations Peoples and communities (Follent et al., 2021). These ongoing impacts are also context and location-specific, and solutions need to be developed from within local cultural, social, and economic environments (Jewett et al., 2021). The efficacy of health emergency planning and management must endorse a collaborative approach across agencies, local governments, and emergency service providers (Emergency Management Australia, 2007) to ensure that cultural contexts, appropriate engagement (i.e., ensuring that First Nations Community members are involved in decisions and actions), and effective communication strategies (i.e., ensuring that individuals, families, and community leaders have the right information at the right times) deliver long-term safety and resilience.
3.4 LITERATURE REVIEW QUESTION 2: THE DEVELOPMENT, USE AND EFFICACY OF PANDEMIC HEALTH PROMOTION INFORMATION IN FIRST NATIONS COMMUNITIES (HPFNC)

The review of literature specifically pertaining to health promotion and public health messaging for Australian First Nations communities returned an initial total of 280 articles of which a final list of 51 papers was developed after successive rounds of screening and qualitative coding (see Figure 8). It is noted that this number of papers is not large due to selecting papers only from 2022 and later. However, this timeframe was selected to provide the most recent publications specific to COVID-19 health promotion activities. Where subsequent significant themes were found in the literature, further investigation of other sources was then undertaken to ensure sufficient evidence was collated for the finding. A total of 238 papers was subsequently coded as irrelevant in the primary, secondary, and/or tertiary rounds of coding and a further three papers were found to be duplicates and were rejected.

Figure 8: Semi-systematic, rapid review process for literature on health promotion and messaging in First Nations regional and remote communities

Papers were screened and reviewed from across discipline areas such as:

- public health promotion and messaging for Indigenous Australians
- pandemic messaging and promotion for regional or remote communities
- disaster management and COVID-19 messaging
- policy documents and legislation, policy briefings, opinion papers, white papers, and other government and non-governmental (non-profit organisation) documents
- First Nations People, promotion and messaging for COVID-19 and pandemics in Australia.

As per the methods developed previously, the process of qualitative coding was applied to the health promotion and messaging literature. A total of 27 primary codes were categorised and cross-coded with the 105 secondary and...
tertiary codes as shown in Appendix B: Qualitative Coding Pivot Tables for Literature Reviews Based on Primary Codes, Table 11. The codes were then collated, and raw counts were investigated through pivot tables.

Approximately 55% of the articles retrieved discussed international strategies and conditions for health promotion and communications (n=28), while 37% of the papers focused on Australian (national) or regional locations (n=19); the remainder were non-specific in terms of study location.

The key themes to arise from the papers selected for review were subsequently analysed, integrated and grouped around the following codes:

» health messaging and communication (n=19), health promotion (n=7) and messaging for behavioural change techniques (n=6)
» issues around vaccine hesitancy (n=5) and perceptions of risk (n=3)
» wellbeing, wellness and health care (n=6), mental health (n=6) and PHC intervention training (n=5)
» working with community members (n=14), Indigenous leadership (n=3) and community-based approaches (n=3)
» Culturally and Linguistically Diverse (CALD) community health messaging (n=6).

When primary codes are then grouped by secondary codes, the themes show obvious synergies and interrelationships. For example, the category of Health messaging/communication incorporates sub-themes of cultural practices, health equity/inequity, promotion strategies, and working with community members. The working with community members category combines the sub-themes of engagement, health promotion, resilience, and social media usage. The findings from analysis of the key themes and their various sub-themes within the literature are discussed below.

3.4.1 Challenges for effective health promotion, messaging, and communication

The "United Nations Research Roadmap for COVID-19 Recovery" (UN, 2020) details a number of priorities for research to deliver a more equitable, resilient and sustainable future for communities globally. For improved health communication and messaging in particular, the UN recommends that action needs to be taken under "Research Priority 1.5: How can health systems engage communities, build trust and support collective responses to emerging health threats" (UN, 2020, pp. 30-31). This priority aims to address the knowledge gaps around approaches to effectively communicate health risks and ensure that at-risk communities are engaged and prepared for the next pandemic/epidemic.

Health promotion strategies are "a set of methods and processes to bring about planned positive social change in groups, communities and societies in order to promote, protect and sustain good health and wellbeing" (Wise et al., 2012, p. 3). Good communication during a pandemic is essential in ensuring communities adopt appropriate preventative behaviours and limit the transmission of the disease (Dubé et al., 2022). Appropriate and culturally responsive communication and messaging before, during and after a health crisis or emergency is critical to ensuring the safety of communities and frontline workers in the field. The challenges for effective health communication and messaging for pandemic response and management are complex and wide ranging:

» **Message creation strategies specific for health crisis and risk contexts.** There are significant differences between traditional health communication practices and the challenges of risk and crisis or emergency messaging that need to be better understood and acted upon. Traditional health messaging and communication has largely consisted of education programs to reduce risky health and lifestyle behaviours (Glik, 2007). The focus is on developing longer-term programs, and policies to improve the health status for individuals and reduce health disparities and inequity over time (Dubé et al., 2022; Glik, 2007). However, crisis and emergency risk communications are usually time- and location-specific and normally impact on only some populations or communities. Crisis communication requires both internal
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communications for frontline workers and external communications for the public. It is a critical tool for
collect public preparedness, acceptance, social and emotional responsiveness, and adoption of the relevant
health risk and prevention measures (Dubé et al., 2022; Lawes-Wickwar et al., 2021). The nature of such
risks and crises presents specific health communication challenges including: the complexity of
communicating scientific uncertainties; the need to reduce or refute rumours and misinformation; the
challenge of general public lack of trust in politicians and authorities; and the need to overcome ethical
issues including health and social inequality, stigma and blame (Capurro et al., 2021; Dubé et al., 2022;
MacKay et al., 2022).

» **Appropriate and accurate language translations and interpretation.** Use of appropriate and accessible
languages is fundamental to render effective the translation and interpretation of the crisis for community
members. As noted by Frederici (2022), during the COVID-19 pandemic, people with limited language
ability in the main languages used to provide information (e.g., English in Australia), resulted in people
being placed at additional risk. For example, Australian government COVID-19 messaging was deemed as
“gibberish” and “nonsensical” (Dalzell, 2020, p. np.) when translated into other languages. This was
reported by the ABC News online during the pandemic (see: www.abc.net.au/news/2020-08-
13/coronavirus-messages-translated-to-nonsense-in-other-languages/12550520). Errors in translation,
inconsistency in communication messages, and poor understanding of cultural contexts, lead to reduced
trust in government messages and increased health risks.

» **Understanding and use of ingroup resources.** Social risk-taking with ingroup members is a well-understood
theory of social behaviour (Cruwys et al., 2021). People in groups will engage in increased risk-taking due
to higher levels of trust of members within the ingroup. During the pandemic, ingroup risk-taking behaviour
had significant impacts on the capacity of the disease to spread to other members. Group identification
and relationships led to perceptions that interacting with other ingroup members was not risky (Cruwys et
al., 2021). The perceptions of trust of other ingroup member opinions also have the potential to undermine
public health messaging responses because there is less trust of communications and health programs
that are developed outside of the group – outgroup prejudice (Ma & Ye, 2021). However, in contrast to this
discussion, one study from the USA (Ma & Ye, 2021) found that high levels of religious ingroup association
could be used to predict potential impacts from COVID-19 for the ingroup population and may present a
strategy to reduce the disease severity under the right conditions. Considering these results, community
tendencies to trust ingroup members can be better utilised to enhance pandemic responses.

» **Participatory and inclusive message development.** Health risk communication specialists working with
Indigenous communities suggest that collaborative approaches to health communication, based in
Indigenous cultures, knowledges and languages, are required for greater message acceptance and
adoption (Dutta, 2016; Gyapay et al., 2022; O’Keefe et al., 2021; Ponder, 2022). Australian regional and
remote communities encompass socially and culturally diverse peoples (Smith et al., 2022). Improved
participatory approaches and better inclusion of local Indigenous community contexts are needed to
ensure that messages are relevant, trusted, culturally appropriate, and respectful (Heaney et al., 2021;
Smith et al., 2022).

» **Message delivery, spokespersons, and media channels.** While message content is critical, message
delivery sites, languages, spokespersons, and media channels also need to be carefully considered
(Federici, 2022; Heaney et al., 2021; Zachariah et al., 2022). Using settings-based approaches to deliver
highly relevant, targeted, culturally appropriate, messages through sporting clubs, men’s sheds, women’s
groups, and field days (Smith et al., 2022), as well as providing better communication training for other
non-clinical workforces (e.g., through Health Multidisciplinary Training programs) has demonstrated some
success in regional and remote Australia. Further, a study in the USA has trialled a children’s story book as
a means of reaching Indigenous communities through children’s education programs (O’Keefe et al.,
2021). While these methods are promising, further research and adaptation of these techniques needs to be completed with Australian First Nations regional and remote communities to adequately evaluate their efficacy and value under Australian community conditions and contexts.

» **Using social media to communicate and provide analytics to support pandemic policy development.** Social media is an important communication tool for outward messaging, but it can also be used to collect and interpret important data on public content, sentiment and perceptions (Yigitcanlar & Kankanamge, 2022; Zhu et al., 2019). Systematic, geotagged analysis of social media (e.g., Twitter) has shown that such analytics can be effective in capturing attitudes and perceptions through a passive crowdsourcing approach (Ghermandi & Sinclair, 2019). Social media analysis can also guide policy makers on appropriate and timely interventions and other resource requirements (Yigitcanlar & Kankanamge, 2022), and can support other government initiatives to assist communities to understand and follow the introduced measures or restrictions (Phillips et al., 2017). One study involving remote Indigenous communities in the Northern Territory, noted that Facebook metrics combined with communication campaign data and national statistics may be useful to assess campaign reach and engagement (Glennie et al., 2022). In their case study, the researchers also noted that, "seeking unscripted COVID-19 prevention video messaging supported community ownership of pandemic messaging, and generated a high level of Facebook user engagement” (Glennie et al., 2022, p. 5). In addition, targeting Facebook users by postcode was both effective and could be completed rapidly and at low cost for effective reach.

» **Nudging as contextual opportunities to communicate.** Ongoing communications with communities and individuals to support behavioural changes needed for pandemic response may adopt a process of nudging programs in allied health settings (Matthews, 2022). Nudging is defined as making use of “choice architecture” (Matthews, 2022, p. 2) within consumer environments to increase the likelihood that individuals will make a particular choice. These modifications can be delivered as the range of relational, visual, auditory, kinaesthetic and other sensory cues to positively influence behaviours and reinforce the more mainstream messages of COVID-19 responses.

### 3.4.2 Vaccination challenges, vaccine hesitancy and effective promotion for vaccine uptake

As at early January 2023, vaccination rates in Australia were high with 72.4% of people aged over 16 years having had three doses of COVID-19 vaccinations and 96% of people over 16 years having received at least two doses of the vaccine (Australian Government Department of Health and Aged Care [AGDoHAC], 2023). In comparison, globally around just 69.1% of the population has received at least one dose and only 25.9% of people in low-income countries have received at least one dose (Global Change Data Lab, 2023). Australian Indigenous population vaccination rates are also positive in comparison with global rates, however notably lower than the general Australian population. For Indigenous individuals who are registered Medicare card holders, first and second dose rates of the COVID-19 vaccination are shown in Table 5.
First Nations communities’ preparedness, concerns, and strategies for addressing COVID-19
Final Report – 2023

Table 5: COVID-19 vaccinations for Indigenous populations by geographic regions as at 29 September 2022

<table>
<thead>
<tr>
<th>Location</th>
<th>Indigenous population based on Medicare registered information</th>
<th>Indigenous individuals to receive 1 dose</th>
<th>Percentage of Indigenous individuals to receive 1 dose</th>
<th>Indigenous individuals to receive 2 doses</th>
<th>Percentage of Indigenous individuals to receive 2 doses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Capital Territory</td>
<td>5,233</td>
<td>4,810</td>
<td>91.9%</td>
<td>4,694</td>
<td>89.7%</td>
</tr>
<tr>
<td>New South Wales</td>
<td>157,433</td>
<td>137,764</td>
<td>87.5%</td>
<td>134,744</td>
<td>85.6%</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>43,759</td>
<td>39,255</td>
<td>89.7%</td>
<td>37,448</td>
<td>85.6%</td>
</tr>
<tr>
<td>Other Territories</td>
<td>162</td>
<td>151</td>
<td>93.2%</td>
<td>147</td>
<td>90.7%</td>
</tr>
<tr>
<td>Queensland</td>
<td>143,039</td>
<td>117,354</td>
<td>82.0%</td>
<td>112,198</td>
<td>78.4%</td>
</tr>
<tr>
<td>South Australia</td>
<td>25,076</td>
<td>20,296</td>
<td>80.9%</td>
<td>18,941</td>
<td>75.5%</td>
</tr>
<tr>
<td>Tasmania</td>
<td>15,797</td>
<td>14,061</td>
<td>89.0%</td>
<td>13,679</td>
<td>86.6%</td>
</tr>
<tr>
<td>Victoria</td>
<td>39,974</td>
<td>36,210</td>
<td>90.6%</td>
<td>35,416</td>
<td>88.6%</td>
</tr>
<tr>
<td>Western Australia</td>
<td>61,590</td>
<td>53,589</td>
<td>87.0%</td>
<td>50,183</td>
<td>81.5%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>49,2063</td>
<td>42,3490</td>
<td>86.1%</td>
<td>40,7450</td>
<td>82.8%</td>
</tr>
</tbody>
</table>

(Source: Adapted from AGDoHAC, 2022)

As noted, these statistics are based on the registered addresses for current Medicare card holders and may not represent the full picture for Indigenous populations, who are potentially either over- or under-represented – particularly for regional and remote community members. The barriers and challenges against vaccine acceptance and uptake are described as follows:

- **Structural and systemic barriers to vaccination.** Structural and systemic inequality in access to healthcare and vaccines has potential to create significant challenges and impacts for Indigenous communities, particularly in regional and remote locations (Aylsworth et al., 2022). In their 2021 study in Canada, Aylsworth et al. (2022, p. 2) noted a range of barriers to vaccinations as self-reported by participants. Participants for the study were randomly selected from respondents from a national survey and included adults “who identified as a Racialized or Indigenous person”, including First Nations Peoples, linguistic minorities and new immigrants residing in Canada. There were a number of concerns reported by participants including:
  a) their capacity to book vaccination appointments through the available internet or telephone options;
  b) lack of translation services;
  c) vaccine rollout procedures and lack of accessibility;
  d) technology requirements that were necessary to access vaccinations; and
  e) access barriers for individuals in non-standard situations such as not having the required identification, or individuals who had precarious immigration status such as undocumented persons and international students (Aylsworth et al., 2022, p. 3).

Other barriers to following public health and vaccination directives included language barriers, travel restrictions and access to vaccination sites.

- **Contact tracing and notification application challenges.** According to another study in Canada (Lang et al., 2021), around two thirds of the study population had not downloaded or did not have access to contact tracing or exposure notification applications. Participants noted issues such as privacy concerns, lack of knowledge on the app logistics, belief that the apps should not be required and technological barriers (Lang et al., 2021). While it is not yet known about the Australian context for this information, further
research needs to be undertaken to understand the potential app acceptance and how this might be better used as a line of communication and messaging for future pandemic updates.

» **COVID-19 disease and vaccination information.** Further barriers for vaccine uptake were strongly related to information about the disease and the vaccine and its dissemination in public spaces (Aylsworth et al., 2022). Participants in the Canadian study reported that the public health information required resources (technology) and skills (literacy and language skills) that presented specific challenges for understanding and accepting the messaging.

» **Vaccine hesitancy.** There is research evidence that vaccine hesitancy is increasing in adults in the majority of countries studied globally (Bults et al., 2015; Loe Fisher, 2021; Nguyen et al., 2011; Royal Society for Public Health, 2020). Within western cultures, vaccine hesitancy arises from social, cultural and historical contexts (Adhikari & Cheah, 2021) where a long history of structural racism, neglect, discrimination, and exploitation of Indigenous and other communities has left a legacy of mistrust towards science, vaccines and other health interventions (Adhikari & Cheah, 2021; Goldenberg, 2021). A rapid review of literature undertaken by an Australian team of researchers noted that hesitancy is associated with psychological beliefs about the risk of infection, severity of the issue, severity of personal consequences due to illness and any risks or effects from the vaccine itself (Lawes-Wickwar et al., 2021). To counter these beliefs and address vaccine misinformation and misunderstanding, research suggests that providing accurate, clear and simple (i.e., minimising high-level, vaccine-related terminology) messages about virus risks and vaccination safety were required. Lawes-Wickwar et al. (2021) noted that messaging that was successful in reducing public fear and hesitancy included framing the benefits of vaccines, reductions in risks and benefits to society, and developing personal narrative messages of people who took up the vaccine. Further, evidence showed that campaigns needed to be delivered through a variety of mixed media through different channels within hospitals and throughout communities.

### 3.4.3 Wellbeing, wellness, and health care promotion to reduce pandemic-related mental health impacts

Research by the Australian Unity Wellbeing Index (2022) observed that Australian peoples’ satisfaction with their health fell below average in 2021. Scores on anxiety, stress and depression were all higher during the pandemic and this has long-term implications for ongoing physical and mental health outcomes. Apart from these rises in general mental distress, pandemics often result in increased instances of post-traumatic stress disorder, substance abuse, domestic violence, child abuse and increased psychological distress for youth (Tayyib, 2022; Usher, Durkin, et al., 2020; Usher, Marriott, et al., 2020). Additionally, the impacts from pandemic containment and mitigation practices such as lockdowns, quarantining and social distancing affected rises in levels of anger and confusion across the population – with longer periods of containment resulting in higher negative psychological outcomes (Evans & Bufka, 2020; Tayyib, 2022). These challenges can also aggravate any pre-existing mental health conditions (Júnior et al., 2020). To reduce the mental health and wellbeing impacts from pandemic trauma, communication and messaging strategies need close attention to ensure community resilience.

» **Translating appropriate, culturally centred health knowledge.** Translating appropriate knowledge for First Nations Peoples is critical within any applied health care setting. Health research and the associated translation of that knowledge into applications, continues to be largely designed, developed and regulated in ways that resist prioritising Indigenous Peoples’ lived experiences (Morton Ninomiya et al., 2022).
appropriate and effective knowledge translation, information needs to be shared with Indigenous communities in ways that are locally relevant, specific and culturally centred. Health research and communications should involve local leaders and Elders and use local protocols for engaging with the information (Morton Ninomiya et al., 2022).

» Strategies for communications to support wellness and wellbeing. Communication strategies need to be community-based and inclusive of local people and processes. A review of literature by Tayyib (2022, pp. 8-13) notes four main strategies for engaging with and educating communities to develop and grow community-based resiliency and reduce pandemic wellness impacts. The strategies include:
   a) Partnering with community leaders (particularly Elders and religious/spiritual leaders) and collaborating with community-based organisations to encourage community-level participation in mental health interventions and reduce stigma.
   b) Creating or re-establishing community support networks including self-help groups to offset the social isolation resulting from quarantine and social distancing measures.
   c) Increasing individual mental health and wellbeing capacities and coping skills for community members through outreach, education and training programs such as Psychological First Aid and Mental Health First Aid (MHFA).
   d) Employing and utilising Community Health Workers (local people who share lived experiences with, and have social capital in, their communities) to provide health-related services, education, and peer support to their communities.

Essentially the message here is to mobilise and empower community-based solutions through educating, training and supporting community members to care for themselves.

» Self-determination for pandemic response. Research has also indicated that a key component of the success of COVID-19 outcomes for Indigenous communities in Australia has been the extent to which their self-determination practices through strategic Indigenous leadership has enabled and promoted protective measures (Moodie et al., 2021). For example, Indigenous Land Councils secured communities through restricting permit access, and Aboriginal community-controlled health services developed local preparedness and response plans (Moodie et al., 2021). Across other Indigenous populations this same outcome is also noted. Research in Pacific Island countries shows that Indigenous People have maintained their wellbeing despite significant decreases in household income from job insecurity due to the pandemic, by drawing on their traditional and customary skills and cultural systems (Scheyvens et al., 2023).}

» Message consistency and the impact of information on wellbeing. Even in nations such as Australia and New Zealand that had high degrees of success in managing and mediating the impacts of COVID-19, one study in New Zealand noted that appropriate “public messaging in a crisis is a powerful tool to influence a positive collective response; information consistency and impact on wellbeing are key factors for listeners” (Officer et al., 2022, p. 736). While the communication and messaging regarding health care in the pandemic have reduced or normalised living with COVID-19, continued focused, targeted public health messages to access appropriate health care options and maintain individual and community wellbeing are required.

» Health and wellbeing for children and youth. While adults have experienced significant trauma from the pandemic, children and youth were perhaps more vulnerable to the experiences of the pandemic and less able to prepare for the dangers and anxieties that surrounded the spread of COVID-19 (Gildersleeve et al., 2022; O’Keefe et al., 2021). A recent study by Children’s Health Queensland Hospital and Health Service (De Young et al., 2021) reported that up to 20% of children under 5 years and up to 44% of parents of young children also experienced high levels of stress and anxiety resulting from lockdowns, changes in routines, social isolation, and trauma from invasive swab testing procedures. To combat and mitigate anxiety for
children and young people experiencing pandemic trauma, contemporary multimedia narratives need to be developed to support mental health recovery (Gildersleeve et al., 2022). See for example a range of resources developed by Children’s Health Queensland Hospital and Health Service, “Birdie and the Virus” available at: www.childrens.health.qld.gov.au/covid-19-birdie-virus/

Figure 9: “Birdie and the Virus” online resources developed by Children’s Health Queensland to support the mental health and emotional wellbeing of families with young children

3.4.4 Working with community members

Engaging and working with communities for disaster management, reduction and resilience is central to ensuring community members are both compliant with health directives and receptive to ongoing pandemic responses and management (Satizábal et al., 2022). Appropriate and effective operationalisation of community engagement processes to disseminate information and provide needed services before, during and after a crisis is critical to disaster risk reduction and response.

» **Utilise the skills and experiences of local practitioners and community connectors.** There is a critical role in emergency management played by community individuals who foster connections within and between emergency services, local government and various community citizens and groups. These individuals (known as connectors) lead and negotiate change within their communities and build relationships. In crisis situations, the community connectors are able to translate the bureaucratic, time and financially constrained state-led processes into actionable, meaningful opportunities for disaster risk reduction and management (Oe & Weeks, 2020; Satizábal et al., 2022). Community connectors may include volunteers and paid employees who work in public, private and non-profit sectors (Filkov et al., 2020; Herranz et al., 2013; Perry, 2004; E. R. Power et al., 2020). (See for example Community Activation and Social Isolation Network: “Mount Alexander Connectors” available at: https://www.mountalexander.vic.gov.au/CASI).

» **Integrate general practitioners and frontline health workers.** As with local connectors, frontline health workers should be integrated into the disaster response and management systems (Burns et al., 2022) for better and more rapid communication and response.

» **Using existing community communication pathways.** In line with integrating frontline workers and using community connectors to engage and inform communities, research has indicated that other existing communication pathways can be used to assist in distributing public health messages among high-risk and susceptible populations (James et al., 2022). In their study James et al. (2022) noted that community connectors were able to have difficult conversations about health among community members and led by community members.

» **Consider different audience characteristics and ways of communicating.** Effective messaging and communication must consider the range of different audiences and the ways in which different individuals
will accept, integrate and/or follow COVID-19 public health guidelines. Research has found that targeting a range of personal characteristics in individuals may result in more effective messaging outcomes. Characteristics included age (older individuals are more responsive), and gender (those who identify as women). People who perceive COVID-19 as threatening, trust governments and authority and access information through traditional news media are all more likely to adopt and follow health guidelines (Moran et al., 2021; Williams et al., 2022). While these characteristics point to key audience groups within communities who can be readily targeted with easily developed message strategies, they also highlight the range of other community members who are potentially not receiving or accessing COVID-19 and pandemic information – for example, younger audiences; those who identify as males; individuals who lack trust in governments and authority; and individuals who do not access traditional news media sources.

### 3.4.5 Health communication and promotion for culturally and linguistically diverse communities

The final key theme arising from this review of the current literature was the challenges of communication with culturally and linguistically diverse (CALD) communities. Australia is well-recognised as an increasingly diverse, multicultural society. Based on the 2021 Australian Bureau of Statistics (ABS, 2021) census initial release of information, just over half of the Australian population were either first- or second-generation migrants (51.1%). As at the census (Australian Bureau of Statistics, 2021), 29.3% of people currently living in Australia were born overseas and 22.2% are second-generation (i.e., they have one or both parents born overseas) as shown in Figure 10.

![Figure 10: Culturally and linguistically diverse communities – Country of birth and ancestry; 2021 snapshot](source)

The use of languages within the home reflects the changing community cultures with Mandarin being the most common language other than English, followed by Arabic, Vietnamese, Cantonese, Punjabi and Nepali (Australian Bureau of Statistics, 2021). While communication information and practice relevant to CALD migrant communities is not particularly connected with, or pertinent for, Australian Indigenous communities, Indigenous People have often been grouped into government and emergency services CALD community strategies and planning due to having English as a second or other language (Australian Institute for Disaster Resilience, 2007; Cultural and Indigenous Research Centre Australia, 2016; Pham et al., 2021). In addition, the pandemic experiences of non-English speaking migrants and Indigenous groups share commonalities due to generally suffering increased health disadvantage and inequality (Kalocsányiová et al., 2022). CALD community experiences also offer insights into different systems of relationships between community members that essentially shape and impact on the ways COVID-19 messaging is...
CALD community experiences influence the way COVID-19 pandemic messages are received, shared and processed. Research by Healey et al. (2022) with Congolese, Afghan and Syrian refugee communities in a regional location in Australia found a number of key themes arising from participants:

a) The lived experiences of CALD communities in terms of their educational background and English language proficiency contribute to feelings of inadequacy, embarrassment and low self-confidence leading to community members being less likely to participate in formal COVID-19 information sessions (Healey et al., 2022, pp. 4-5).

b) Different CALD groups and sub-groups use different practices when accessing and sharing COVID-19 messages including different preferred message sources, formats (e.g., audio-visual, text messaging, pictorial signs or posters, social media apps), and whether or not individuals had opportunities to access various messages due to literacy, trust, mental health, or connectedness with other community members and social cohesion (Healey et al., 2022, pp. 5-7).

c) Official government messaging could be improved by actively listening to community member views, and co-creating messaging that recognises and respects different cultures and sub-cultures (Healey et al., 2022, pp. 7-8).

Forming partnerships to increase health literacy, multicultural health understanding and community engagement. Evidence from the highly socially, culturally and economically diverse areas of Western and South-western Sydney during the COVID-19 Delta outbreak, offers a model of co-designed, communication and health literacy improvement strategy that has led to development of a variety of resources, tools and community of practice knowledge (Zachariah et al., 2022). A partnership between the Western Sydney Local Health District (WSLHD) and the University of Sydney established the Health Literacy Hub (see: https://www.healthliteracyhub.org.au) (WSLHD, 2023). The hub’s aim is to overcome the challenges of pandemic messaging including language and readability (Mishra & Dexter, 2020), culture, and the need to develop and disseminate nuanced messages at significant speed to meet and overcome health literacy barriers (Mac et al., 2021; Zachariah et al., 2022) and public perceptions through appropriate media. The partnership approach offered research academics, local practitioners, and community members opportunities to consolidate knowledge and utilise the networks of each to achieve their overall goal of increased ease of access for consumers and practitioners to find and use health-related information (WSLHD, 2023).

Employing an activity chain approach. Another study in Victoria by Karidakis et al. (2022) was undertaken with Chinese, Greek and Italian community organisations to assess the success of public health communication using an activity chain approach. As noted by Karidakis et al. (2022, p. 68), “key members of the community organisations described their role as an extended process of information brokering. This involved an activity chain from the original preparation of information in English to multilingual translation and then distribution to and by CALD community organisations”. The activity chain process enabled CALD community organisations to adapt the government information to the needs of their communities but could be better used in wider applications with community partnerships.

Different cultures, nationalities and religions influence the development and spread of the virus. Heightened awareness of differences between cultural, national and religious customs is necessary to ensure community protection and long-term recovery from pandemic stress. While governments have needed to tighten legislative and administrative controls to impact the spread of the virus, it remains crucial to continue to guarantee equal rights for women and cultural differences, freedom of expression,
access to education and critical information, and opportunities to belong to, and socialise with, organisations and individuals as part of the human condition (Sawicka et al., 2022). Different cultures and nations have taken alternate paths to COVID-19 controls, but essential human rights must not be ignored or overlooked in the crisis.

» While not specifically highlighted in the above-reviewed communications and promotion literature, the current role and activities of ACCHOs (The Centre of Research Excellence in Aboriginal Chronic Disease Knowledge Translation and Exchange [CREATE], 2020) needs further exploration and discussion. The accessibility to ACCHOs for First Nations communities is a significant contributing factor to creating culturally competent PHC communication and delivery for regional and remote First Nations communities (Gomersall et al., 2017; Hickey et al., 2021). There are currently 140 ACCHOs Australia-wide that are geographically located where Aboriginal and Torres Strait Islander People live (Beks et al., 2022). Support services provided by ACCHOs to community members include offering safe transport options, delivering outreach programs, and providing a culturally safe space within which to receive medical services (Gomersall et al., 2017). Studies highlight the value of ACCHOs in terms of advocating for First Nations Peoples’ emotional and spiritual wellbeing (Gomersall et al., 2017; Pearson et al., 2020) and serving as social meeting sites where community members engage in preventative educational seminars and a range of other activities (CREATE, 2020).

Figure 11: Aboriginal Community Controlled Health Organisations in practice – Ways of working

3.4.6 Summary of literature review for question 2

3.4.6.1 Key themes and sub-themes

The review of literature pertaining to research Question 2 identified five key themes and a range of related sub-themes:

1. **Key challenges for effective health promotion, messaging, and communication included:**
   » Message creation strategies need to be developed specific for health crisis and risk contexts.
   » Appropriate and accurate language translations and interpretation is crucial for clear, effective messaging.
   » Understanding of social risk-taking with ingroup members requires better understanding and development of appropriate ways to use ingroup communication and resources.
Participatory and inclusive message development requirements for effective health risk communication for Indigenous communities with messages based in Indigenous cultures, knowledges and languages required for greater message acceptance and adoption.

Message delivery, spokespersons, and media channels need to be researched and carefully selected to ensure appropriate and effective message coverage, delivery sites, languages, influencers, and vehicles.

Using social media to communicate and provide analytics to support pandemic policy development.

Using nudging as contextual opportunities to communicate with communities and individuals to support behavioural changes needed for rapid and appropriate pandemic responses.

2. **Major vaccination challenges, vaccine hesitancy and effective promotion for vaccine uptake included:**

   » Structural and systemic barriers to vaccination
   
   » Contact tracing and notification application challenges.
   
   » COVID-19 disease and vaccination information availability presents specific challenges for understanding and accepting the messaging.
   
   » Vaccine hesitancy arising from a long history of structural racism, neglect, discrimination, and exploitation of Indigenous and other communities that has left a legacy of mistrust towards science, vaccines and other health interventions.

3. **Key literature on wellbeing, wellness, and health care promotion to reduce pandemic-related mental health impacts showed a number of challenges including:**

   » Translating appropriate, culturally centred health knowledge for First Nations Peoples is critical within any applied health care setting.
   
   » Communication strategies to support wellness and wellbeing need to be community-based and inclusive of local people and processes.
   
   
   » Message consistency and the impact of appropriate and timely information is crucial in on wellbeing in managing and mediating the impacts of COVID-19.
   
   » Health and wellbeing for children and youth needs greater consideration due to increased vulnerability to the experiences of the pandemic and less ability to prepare for the dangers and anxieties that surrounded the spread of COVID-19.

4. **Critical information on working with community members included:**

   » Utilising the skills and experiences of local practitioners and community connectors.
   
   » Integrating general practitioners and frontline health workers into the disaster response and management systems for better and more rapid communication and response.
   
   » Using existing community communication pathways.
   
   » Considering different audience characteristics and ways of communicating for effective messaging to the range of different audiences within communities – including younger audiences; those who identify as males; individuals who lack trust in governments and authority; and individuals who do not access traditional news media sources.

5. **Key challenges for health communication and promotion for culturally and linguistically diverse communities included:**

   » Understanding of the different lived experiences of CALD communities and how these influence the way COVID-19 pandemic messages are received, shared, and processed.
   
   » Necessity to form partnerships to increase health literacy, multicultural health understanding and community engagement.
   
   » Employing an activity chain approach to adapt government information to the needs of different communities’ sectors.
Continuing research into understanding the ways different cultures, nationalities and religions influence the development and spread of the virus.

3.4.6.2 Essential take-away messages

The above review of literature on the development, use and efficacy of pandemic health promotion information in First Nations Communities, has highlighted a range of learnings, strategies, opportunities, and ongoing challenges post-COVID-19 for better communication and messaging for health outcomes. The key points to be taken into account moving forward are:

1. Health messaging is typically developed by experts in the field of health and often from a top-down (government-initiated) approach (Ebi & Semenza, 2008; Morrison et al., 2005); not necessarily in collaboration with the message’s intended audience. Effective health communication relies on behavioural change theories and largely concentrates on viewers’ perceived barriers to change (Hyland-Wood et al., 2021, p. 2). The application of Euro-centric behavioural change models to First Nations pandemic health messaging is problematic due to the high level of specific, medical or health knowledge typically required of the target audience by the message designer (Daly, 2019, p. 32). Detailed assessment of inherent beliefs, customs, values, languages, and socio-cultural histories, along with an understanding of the attitudes, impetus and ability of the target group is needed for effective communication to occur. Health messages designed by non-Indigenous health experts for First Nations recipients may rely on homogenised and stereotyped (Aronson et al., 2013) mainstream products. To address this shortcoming, research findings advocate for the adoption of collaborative approaches, inclusive of First Nations perceptions of health and wellbeing, to create effective health communications (Christou & Thompson, 2013; Schoen et al., 2010).

2. The review of the health promotion literature demonstrated that much of the information about health promotion and messaging is already well-established. The literature outlined that effective implementation of pandemic health messaging requires the use of local knowledges and frameworks. To achieve relevant, effective messaging for First Nations groups, local communities need to actively participate in each stage of the design, dissemination, and evaluation processes. Partnerships between community members, local organisations, community connectors and health message authors are essential in the development and distribution of promotional material. Utilising health messaging activity chain processes to develop multilingual, culturally sensitive resources and messages, applying a wide range of media channels relevant to local contexts, and engaging support from ingroup communities are strategies that need further investigation and implementation to ensure better and more effective health communication.

3. Research reviewed outlined a range of culturally appropriate strategies aimed towards supporting tailored health promotion and health care during pandemics. Significant emphasis is placed on First Nations co-design of health messaging that incorporates local languages, customs, beliefs, rituals, and respectful consideration of the specific needs held by the community. The assembly of more than one hundred First Nations researchers in April 2020 resulted in a series of research-based COVID-19 recommendations presented to the Commonwealth Government (Moodie et al., 2021). The Roadmap to Recovery report compiled by the Group of Eight Taskforce (Go8, 2020) focused on five core recommendations including the benefits of First Nations self-determination and reflective leadership in pandemic planning and response (Moodie et al., 2021, p. 7). According to the report, “connection to community, culture, and the advice of Elders are critically important in times of crisis” (Moodie et al., 2021, p. 11). The federal government’s decision to convene an Aboriginal and Torres Strait Islander Advisory Group on COVID-198 (AGDoHAC, 2021) is

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8 The Aboriginal and Torres Strait Islander Advisory Group on COVID-19 has been superseded by the National Aboriginal and Torres Strait Islander Health Protection (NATSISHP) Sub-committee of the Australian Health Protection Principal Committee (AHPPC). For further information see: https://www.health.gov.au/committees-and-groups/the-national-aboriginal-and-torres-strait-islander-health-protection-ahppc-sub-committee
a clear example of official recognition of Indigenous perspectives in pandemic response processes (AGDoHAC, 2021; Bishop, 2009; Crooks et al., 2020). According to Crooks et al. (2020, p. 1), the Advisory Group developed principles of shared decision-making, power sharing, two-way communication, self-determination, leadership and empowerment. The Management Plan for Aboriginal and Torres Strait Islander Populations (AGDoH, 2020, p. 21) recommended that communication of prevention and control measures be targeted and tailored towards diverse components of Indigenous communities including:

» individuals;
» families of individuals with COVID-19;
» remote communities;
» health and allied health care workers;
» ACCHOS; and
» FIFO workers who may live in, close to and/or interact with Aboriginal and Torres Strait Islander communities.

4. Frontline health staff and other community workers should be trained in assisting with culturally appropriate education and communication practices and integrated into crisis planning and management.

5. A common theme present across the literature is the design of programs specific to preventative strategies in preparation for future pandemics. The research outlines the need for programs that target First Nations Peoples’ access to vaccinations, equitable health services and culturally relevant resources, as well as education concerning the spread of communicable diseases. Successful First Nations early responses to COVID-19 demonstrated that when self-determination actions are taken by and with communities, pandemic health outcomes improve. Ongoing pandemic and disease health literacy will continue to play a vital role in supporting community members to understand when and how to access medical services during a health crisis. Health messaging that reflects First Nations Peoples’ lived experiences, written in Indigenous languages, and that demonstrates connection to country, local traditions, and culture, will support Indigenous communities over the long term.

Figure 12: An example of visual messaging translated into the Yanyuwa First Nations language

(Source: Adapted from Australian National University [ANU], 2020 (3 June))
3.5 LIMITATIONS OF THE REVIEW

Limitations of this review are:

» While extensive, the review was conducted by one researcher of the team, and was limited in scope by time, capacity, and resources. Therefore, a semi-systematic, rapid review approach was taken to ensure a rigorous approach to the multiple searches, coding, and analysis, but it is limited in the range of literature that can be adequately assessed. The nature of a rapid review is to provide a snapshot of current thinking, but this limits the depth of research on specific topics that can be reviewed as a result.

» In this same vein, the review was conducted over a three-stage process because of the breadth of the questions driving the overall study. Future literature capture and analysis could adopt each of the key themes and examine them separately to provide a more fulsome picture of the range of research that may contribute to each thematic finding.

» While the challenges of statistically defining and appropriately allocating resources for Aboriginal and Torres Strait Islander Persons has been brought to the fore in the review, overall, current definitional arrangements for identifying Aboriginal and Torres Strait Islander Persons is a contentious and highly debated issue (Crooks et al., 2019; Gardiner-Garden, 2003; Kite & Davy, 2015; Luke et al., 2020). As a result, reports and the associated data based on these attributes (such as the epidemiological reports) are problematic. Erroneous identification of First Nations Peoples in academic and grey reports, surveys and registers, presents significant obstacles to gathering correct information for analysis on pandemic risks, recovery issues, and health messaging for Aboriginal and Torres Strait Islander Peoples.

» As shown in this review, a wide range of literature across a diverse collection of discipline areas has been gathered and analysed. However, while this provides an indication of the extent of research and potential knowledge in this area, the diversity also highlights there are few convergent topics across both research questions. This leaves significant gaps in knowledge across both areas and ultimately indicates that a great deal of practice and information is currently being based on unsupported or untested findings from a number of small-scale studies and cases.

» The research is also limited by the exclusion criteria as the searches could only be conducted in English and were conducted via the singular portal of Google Scholar search constructs. While additional material has been sought to provide further evidence of the findings, it is still recognised that this review is constrained.

» Across the literature generated through database searches, Torres Strait Islander Peoples and communities are considered alongside Aboriginal Peoples and communities. There appeared to be a lack of research solely concentrated on Torres Strait Islander Peoples and communities.

» Literature located and analysed for this review highlights an abundance of public health promotion material for long-term health behavioural change and short-term health management programs. However, the literature equally highlights the limitations in accessible and relevant COVID-19 health promotion material for regional and remote Australian First Nations Peoples and communities and the limited resources available for health crisis and pandemic preparedness, management and response. It is this lack of knowledge that is a critical gap and highlights there has been a lack of collaboration between federal, state, territory and local governments, community organisations, and Indigenous Peoples to develop and maintain a database of useful, effective information.

Research outcomes call for greater use of First Nations research guidelines, local input and feedback, and recognition of individualised needs across Aboriginal and Torres Strait Islander communities that are context-, culture- and place-based. Qualitative and quantitative material analysed for this review suggest that meaningful COVID-19 health messaging that facilitates self-determination for First Nations communities incorporates local initiatives and
respectful acknowledgement of local processes embedded within government policy. While many First Nations voices have been sought, the literature clearly outlines the need to integrate Indigenous knowledges and practices within health promotion material to maintain credibility and integrity across messaging resources.

4  DESKTOP ANALYSIS: LOCAL GOVERNMENT PANDEMIC & DISASTER MANAGEMENT PLANS

Returning to the two research questions and the key issues to be addressed by this study, a major component of the research design has been to examine Local Government disaster management plans specific for pandemic disasters. This was done to establish a baseline evaluation of the depth of current incorporation of Indigenous knowledges and practices (IKP) in planning, preparation, response, and recovery documentation.

This component of the research was undertaken during late 2021 and early 2022. The number and availability of pandemic management plans has changed since this time. However, the information provided here remains relevant to the discussion of preparedness, response capacity and recovery planning due to the recency and rapidity of pandemic plan development and the potential gaps in thorough planning and preparation that this speed of development inherently encourages.

The analysis examined what (if any) engagement activities with First Nations communities is already captured and utilised within the local-level disaster management planning processes. A broader intent of this work, was to discover the extent of current evidence to measure Australia’s progress against the Sendai Framework Priorities for Action 2015-2030 (UNDRR, 2015). This study component therefore investigated local government planning documentation and communications for pandemic and/or health disaster management that was publicly available, to identify the current level of preparedness specifically for Australian First Nations regional and remote communities. International benchmarks such as the Sendai Framework not only advocate for significant measures to substantially reduce disaster losses and risks, but also for the incorporation of First Nations Peoples’ knowledges to complement scientific knowledge in disaster preparedness, management, and recovery (Pan American Health Organization [PAHO] & World Health Organization [WHO], 2014; UNDRR, 2015).

One of the guiding principles underpinning the development and implementation of the Sendai Framework is:

Disaster risk reduction requires a multi-hazard approach and inclusive risk-informed decision-making based on the open exchange and dissemination of disaggregated data, including by sex, age and disability, as well as on easily accessible, up-to-date, comprehensible, science-based, non-sensitive risk information, complemented by traditional knowledge (UNDRR, 2015, p. 13).

4.1 METHODOLOGY

Our approach was to identify local government shires and councils (LGAs) across all states and territories in Australia with significant populations of Aboriginal and/or Torres Strait Islander Peoples. The study then utilised a critical content analysis (Hunting, 2021; Radel et al., 2023) to compare the final selected set of Local Disaster Management Plans (LDMPPs) against the recommendations from the Sendai Framework and the national health guidelines as laid out in the Australian Emergency Management Arrangements Handbook (AIDR, 2019) and the Australian Health Sector Emergency Response Plan for Novel Coronavirus (COVID-19) (DoH, 2020). The research also investigated the incorporation of any available health messaging on LGA websites to determine the potential communication outputs by LGAs. The methodology employed for this task was extensive and exhaustive.
The study identified a total of 88 Australian LGAs which have a significant First Nations population. This selection was based on a three-stage process:

- All Aboriginal and Torres Strait Island Shire Councils in Queensland were included.
- A list of Indigenous communities and the LGAs in which they reside was compiled from the National Indigenous Australians Agency (NIAA) website.
- A list of LGAs with significant First Nations populations was generated based on population data from the ABS (2022).

Table 6 presents the numbers of councils and shires from each approach for all states and territories.

<table>
<thead>
<tr>
<th>State/Territory</th>
<th>Aboriginal and Torres Shire Councils</th>
<th>NIAA listed Communities</th>
<th>ABS database</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>New South Wales</td>
<td>-</td>
<td>9</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>-</td>
<td>10</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Queensland</td>
<td>17</td>
<td>-</td>
<td>7</td>
<td>24</td>
</tr>
<tr>
<td>South Australia</td>
<td>-</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Tasmania</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Victoria</td>
<td>-</td>
<td>-</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Western Australia</td>
<td>-</td>
<td>7</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td><strong>29</strong></td>
<td><strong>42</strong></td>
<td><strong>88</strong></td>
</tr>
</tbody>
</table>

Note: The Australian Capital Territory is unincorporated (i.e., not administered by an incorporated body) and as such does not have a local government area council or shire. The local government functions are performed by the territory government. In total, 1.8% of the population is Aboriginal and/or Torres Strait Islander.

In addition to this dataset, a further four NT community Local Emergency Management Arrangement (LEMA) documents were included as they were directly related to Indigenous communities and were not captured in the LDMPs.

A total of 91 documents were collated as the sample for the critical content analysis. A total of 82 LDMPs and nine pandemic sub-plans that were publicly available at the time, were included in this analysis. Nine of the 88 selected LGAs did not have their LDMPs available online, two of the Torres Strait Island LGAs share a single common LDMP (the Torres Shire Council and the Torres Strait Island Regional Council).

Only nine pandemic-specific sub-plans were identified and included in the analysis. At the time of completion of this component of the research only nine sub-plans were publicly available, however a number have since been developed and released. Many regional and remote communities did not have pandemic sub-plans developed at that stage. Pandemic sub-plans appear also to be largely for internal use only and were therefore not publicly available during the period of data collection.

### 4.2 LOCAL DISASTER MANAGEMENT PLAN ANALYSIS FINDINGS

The comparative analysis focused on three major areas:

- **Indigenous knowledges.** To identify whether the LDMPs incorporate Indigenous knowledges and/or traditional practices on disaster management.
- **LGA Pandemic Plans.** To identify whether local disaster management arrangements have pandemic management plans in place.
COVID-19 messaging and communications. To identify the extent of COVID-19 health promotion and messaging available for local communities on the local government websites.

The critical content analysis coding and reduction processes (Bohman et al., 2005; Krippendorff, 2019; Radel et al., 2023) examined the plans and sub-plans for a range of comparison terms and themes as shown in Table 7.

<table>
<thead>
<tr>
<th>Indigenous status</th>
<th>Knowledge</th>
<th>Community</th>
<th>Culture</th>
<th>Pandemic</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Nations</td>
<td>Traditional methods</td>
<td>Community engagement</td>
<td>Cultural considerations</td>
<td>Pandemic risk</td>
</tr>
<tr>
<td>Aboriginal</td>
<td>Practice(s)</td>
<td>Community consultation</td>
<td>Culturally sensitive approach</td>
<td>Pandemic management</td>
</tr>
<tr>
<td>Torres Strait</td>
<td>Wisdom(s)</td>
<td>Consultation with Elders</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.2.1 Indigenous knowledges and practice inclusion

The extensive comparative analysis of 82 LDMPs across all Australian States and Territories included in this study, reveals primarily no evidence of Indigenous knowledges or practices being specifically incorporated into LDMPs. This is in contrast to the Sendai Framework recommendations. Other key findings include:

» A number of councils or shires demonstrate that Indigenous community consultations have been undertaken and ongoing consultations are evident.
» The majority of LDMPs include directives for community engagement and resilience building efforts to be undertaken.
» Some of the plans include more specific directions for CALD communities.
» The majority of the plans appear to be generically drafted rather than tailored for individual communities and contexts.

4.2.2 Local government pandemic sub-plans

The second issue investigated by this analysis was to identify whether pandemic management plans that were available at the local government level, align with the national guidelines (AIDR, 2019) and DoH (2020) recommendations. The pandemic sub-plans primarily list the structural requirements and departmental responsibilities of managing agencies at the local level and include some risk-specific strategies for management. However, the strategies are largely general and lack detail. This comparative study shows that:

» While most councils and shires have specific pandemic sub-plans, most are not publicly available. They appear to be internal documents for use within the organisation, and were therefore not included in this study’s analysis. Analysis was limited to those nine publicly available pandemic sub-plans as shown in Table 8 – seven from QLD, and one each from SA and VIC.
» The majority of LDMPs analysed in this study included discussion of the risk of a human pandemic and some had updated information regarding previous pandemics (Table 8).
» The risk of various diseases including dengue, influenza, Ebola, H1N1 and COVID-19 was mentioned in most local disaster management plans and some lessons from the past outbreaks were included.
» Many councils and shires had their local COVID-19 management plans and recovery policies listed on their websites.
South Australia’s Flinders Range Council had a pandemic management sub-plan which mentioned the need for region-oriented pandemic management and close coordination between local communities.

Similarly, the state-level Viral Respiratory Disease Pandemic Plan for South Australia identified the increased risk for Aboriginal communities and noted the need for additional healthcare support for remote Aboriginal communities along with culturally appropriate messaging.

Table 8: Availability of pandemic sub-plans and indication of level of pandemic planning

<table>
<thead>
<tr>
<th>State</th>
<th>Pandemic sub-plans available</th>
<th>Pandemic sub-plan noted but not available online</th>
<th>Pandemic and/or influenza information included in LDMPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>NT</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>QLD</td>
<td>7</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>SA</td>
<td>1</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>TAS</td>
<td>0</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>VIC</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>WA</td>
<td>0</td>
<td>3</td>
<td>10</td>
</tr>
</tbody>
</table>

4.2.3 Local government COVID-19 specific messaging

The extent of COVID-19 related public messaging undertaken by local government councils and shires was also investigated, by examining public LGA websites. The websites of 88 councils and shires were examined to identify localised public messaging regarding COVID-19, along with the availability of targeted information for First Nations Peoples. This study found that:

- A majority of council websites had COVID-19 information of varying degrees available for the public.
- Among these, some websites had easily visible information on the homepage, but a few had the information only as part of their newsletters.
- Five Queensland councils presented a compact disaster dashboard on their website which provided a clearly visible and concise set of disaster-related information.
- Halls Creek Shire in WA stood out with the provision on the website, of easy-to-follow information, posters, Aboriginal community directions and Aboriginal health information.
- Mildura council in Victoria also stood out with information available on mental health support, financial hardship support and a November 2020 Survey on the Community Impacts following the COVID-19 pandemic (see: https://nla.gov.au/nla.obj-2961025845/view). This survey publication has since been archived in the Trove, State Library of Victoria collection.

Figure 13: Mildura Rural City Council, “How COVID-19 Impacted our Community: Community Survey Snapshot”

Published in 2020

4.3 SUMMARY OF THE DESKTOP ANALYSIS

There was no evidence of the incorporation of Indigenous knowledges or practices into LDMPs despite some evidence of community consultation. Furthermore, LDMPs overall appear to be generically drafted rather than tailored to individual community contexts.

The majority of local government websites had varying amounts of COVID-19 information posted for the public, however these were also varied in their accessibility for local audiences, i.e., in simple language or otherwise. Positive examples of information communication included provision of accessible and concise disaster-related information, compact disaster dashboards, and inclusion of information specifically targeting Aboriginal populations. One council website also provided information regarding mental health and financial hardship support.

4.4 LIMITATIONS OF THE DESKTOP ANALYSIS

The limitations of the desktop analysis are:

» While 82 LDMPs were included in this study, restricted public availability of local government pandemic-specific sub-plans limited the scope of the analysis to three jurisdictions only (Queensland, South Australia and Victoria).

» As noted previously, the desktop analysis was undertaken during late 2021 and early 2022. The number and availability of pandemic management plans has changed since that period, due to the global focus on pandemic management as a result of the ongoing COVID-19 situation. However, as noted, the information provided here remains relevant to the discussion of preparedness, response capacity, and recovery planning due to the lack of information that was available prior to and during the heights of the pandemic crisis period (from 2019-2022). It is imperative to have timely and up-to-date planning processes that have regular revisions scheduled to ensure appropriate preparedness. The recency and haste of the pandemic plans developed and the potential gaps in thorough planning and preparation that this speed of development inherently encourages needs to be addressed.

» The desktop analysis, while extensive and rigorous, was conducted by one researcher of the team, and was limited in scope by time, capacity, and resources. It is also only a snapshot of the disaster management plans and pandemic sub-plans that were available and accessible during the data collection period.

5 KEY STAKEHOLDER & COMMUNITY ENGAGEMENT

In alignment with the research aims and questions outlined in the introduction of this report, perspectives of key stakeholders in local disaster management were sought. The original research aimed to engage with, and interview, key stakeholders across the jurisdictions of Western Australia, Northern Territory and Queensland. However, due to time limitations and COVID-19 travel restrictions, and following initial stakeholder mapping and engagement, site visits were proposed for within Queensland only. Border closures prevented the essential element of face-to-face community engagement with First Nations communities across Australia as per the original proposal, and the research team made the decision to limit the geographical scope of this component of the project. In addition, the emergence of COVID-19 in some communities within Queensland that had previously provided formal council support of the project, also precluded some site visits to those locations as community leaders expressed the wish to limit non-essential visits.

The resulting modifications to the scope of this component of the project required significant changes to the overall research design and data collection processes. Phone and face-to-face interviews were undertaken with key stakeholders, identified in this study as members of local disaster management groups (LDMGs) and community members of discrete, remote First Nations communities, and towns or centres with large First Nations populations.
While the desktop study of LDMPs could take the whole-of-Australia view, the results and findings in this section reflect the revised focus on the Queensland situation. As such, the next section of this discussion provides an overview of the disaster management contexts within Queensland specifically.

5.1 CONTEXT – STATE DISASTER MANAGEMENT ARRANGEMENTS IN QUEENSLAND

The Queensland State Disaster Management Plan (QSDMP), authored by the Queensland Disaster Management Committee (QDMC), makes provision for the roles and responsibilities of entities involved in DM. Queensland Fire and Emergency Service (QFES) provides a key role in optimising the efficiency of LDMGs both through representation on all LDMGs, and preparation and provision of guidelines to develop management plans (Queensland Government [QG], 2018). The Queensland disaster management arrangements encompass all phases of Prevention, Preparedness, Response and Recovery (PPRR) and are based on partnership arrangements between local governments and the state, with extra support and planning provided at the district level (Figure 14).

The state DMP aligns with the federal planning process as was discussed in Section 2.2 and shown in Figure 6. When a disaster exceeds a state or territory’s response capacity, Emergency Management Australia\(^9\), under the Department of Home Affairs (AGDHA, 2022b), may provide a wide variety of assistance and support, including aid from defence forces if needed.

Figure 14: Queensland disaster management structure

Note: The Australian Government Crisis Coordination Centre is now called the National Situation Room as shown in Figure 6.

5.1.1 State pandemic plans

The Queensland State Disaster Management Plan (QDMC, 2018) states that hazard-specific plans, or sub-plans, must include how disaster management arrangements link with the hazard-specific arrangements. While the QSDMP has a focus on natural disasters, the links between pandemic management and local disaster management are described.


Consistent with Australia’s strategic approach to emergency management, Figure 15 summarises QH activities for pandemic influenza management, based on the Australian Health Management Plan for Pandemic Influenza (AGDoH, 2019) and the QH Disaster Emergency Incident Plan (QH, 2019).

Figure 15: Pandemic management framework of Queensland

<table>
<thead>
<tr>
<th>AHMPPi Stages(^1)</th>
<th>AHMPPi Sub-stages(^1)</th>
<th>Characteristics of the disease that inform key activities (See AHMPPi for key activities in each stage)</th>
<th>Queensland response arrangements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention</td>
<td>Prevention(^*)</td>
<td>No novel strain detected or emerging strain under initial investigation</td>
<td>Prevention</td>
</tr>
<tr>
<td>Preparedness</td>
<td>Preparedness</td>
<td>No novel strain detected or emerging strain under initial investigation</td>
<td>Preparedness</td>
</tr>
<tr>
<td>Response</td>
<td>Standby</td>
<td>Sustained community person-to-person transmission overseas</td>
<td>Alert Lean Forward</td>
</tr>
</tbody>
</table>
| Initial Action       | Cases detected in Australia Initial  
  • when information about the disease is scarce  
  • when enough is known about the disease to tailor measures to specific needs | Stand up                         |
| Targeted Action      | Virus no longer presents a major public health threat | Stand Down                       |
| Recovery             | Recovery\(^*\)           | Virus no longer presents a major public health threat | Recovery                         |

(Source: Adapted from QH & QFES, 2020 March, p. 10)

The Whole-of-Government Pandemic Plan (QH & QFES, 2020 March, p. 8) indicates that “Queensland’s disaster management arrangements may be utilised to support QH in the management of a pandemic”. With QH as the designated lead agency in the event of a pandemic, Hospital and Health Services are described as the lead agency for pandemic response on local and district disaster management groups in order to provide specialised response capacity. Further, the LDMGs and DDMGs anticipated response would be for them to “move to ‘stand up’ in support of their relevant HHS as the lead agency” (QH & QFES, 2020 March, p. 8), although little detail is provided regarding distinct roles and responsibilities.

5.1.2 Local disaster management arrangements and planning

Management of a disaster at the community level is conducted by local governments who are responsible for the development and implementation of their LDMP, using a tailored approach to ensure plans are suited to local contexts. Risk-based planning for disaster management is aligned with the Queensland Emergency Risk Management Framework, aiming to decrease or eliminate community impact across disaster PPRR efforts (QDMC, 2018). These plans are made available to both DDMGs and community members. Further, hazard-specific plans are developed in which coordination and operational requirements may differ. Local governments may undertake specific community engagement activities as part of community preparedness and resilience building. Strategies may include community awareness campaigns and education programs in order to prepare for and respond to an event (QDMC, 2018).

5.1.3 Local government arrangements in Queensland

Of the 77 local governments (also known as councils) in Queensland, 22% (n=17) are discrete Indigenous communities (Local Government Association of Queensland [LGAQ], 2022) including amalgamated communities in the Northern Peninsula Area Region and two councils in the Torres Strait Island Region which borders Papua New Guinea (see
Appendix A: Local Government Area Boundaries Queensland). Some other remote local government areas, although not covering discrete Indigenous communities, have large First Nations populations.

**5.1.4 Significant COVID-19 related events in the area participating in the research**

In March 2020, Australia closed its borders to all non-citizens and non-residents. At the same time, the Biosecurity (Human Biosecurity Emergency – Human Coronavirus with Pandemic Potential) Declaration 2020 was made under the Biosecurity Act (AG, 2021), giving the Commonwealth Health Minister expansive powers to combat the outbreak through the issue of declarations and directives (Maclean & Brennan, 2020; Mclean & Huf, 2020). Immediate directives included a determination that required people, subject to some defined exceptions, to remain outside specified remote communities with significant Indigenous populations, identified as priority populations with greater risk from COVID-19. These restrictions remained in place until June 2020.

Cases of COVID-19 emerged in remote Queensland communities including the Torres Strait in December 2021 with outbreaks in several Far North Queensland communities by January 2022 (Richardson, 2021; Smee, 2022). COVID-19 vaccinations commenced in remote communities in Queensland in March 2021 in the Torres Straits of Far North Queensland in order to protect the region from COVID-19 incursion from nearby Papua New Guinea (Smith, 2021).

There had been no local transmission of COVID-19 in the three remote sites of this study during research visits, but COVID-19 had emerged in other sites where participants were subsequently interviewed by phone.

**5.2 RESEARCH METHODOLOGY**

The research design for this component of the project engaged a qualitative, community-based research (Minkler, 2005) approach.

**5.2.1 Participant recruitment**

Purposive sampling (Damianakis & Woodford, 2012; Radel, 2018) was used to recruit participants directly involved with disaster management in remote Indigenous communities or towns/centres with large First Nations populations. Participants represented the local, regional, or state level in Queensland DM. Following stakeholder mapping, initial approaches were made to relevant local governments. Where formal support for the research project was provided, site visits were proposed to interview elected council members involved in their LDMG and other council staff to ensure an understanding and awareness of LDMPs and strategies. To further support our investigation into the impacts of COVID-19, we also sought to interview other community members during these site visits. Following the networking approach of purposive or snowball sampling (Naderifar et al., 2017), community members were invited to participate in interviews following recommendations from their local government staff. These participating community members were provided with $30 local store or phone recharge vouchers in acknowledgement and appreciation for their time.

All travel was completed between state and/or federal lockdowns, and in compliance with COVID-19 restrictions. The research team was double-vaccinated (at the time of the community visits), and community leaders were consulted again immediately prior to any travel to communities.

**5.2.2 Participant attributes**

Interviewees represented eight remote sites across the far northern and western regions of Queensland, with Indigenous population proportions ranging from 23-97%. These sites included discrete Indigenous local government
areas and remote towns/centres. The majority of participants spoke of their LDMPs and local experiences. Regional and state perspectives were provided by six individual participants.

A total of 61 stakeholders participated in 33 interviews conducted between October 2021 and March 2022. Three remote sites were visited where 22 interviews with 49 community members and/or LDMG members were conducted face-to-face. These interviews were undertaken mainly in workplaces with appropriate organisational approvals with either individuals or groups ranging from two to seven participants. A further nine phone interviews and two face-to-face interviews with stakeholders across Queensland were undertaken. All interviews were undertaken by researcher JR.

The majority of participants identified as Indigenous (n=40, 67%) and identified as community residents (n=51, 83%). Of the total number of participants, 18 were involved in local government and/or LDMGs. Those defined as “community members with no council affiliations” numbered 41.

5.2.3 Interview framework

Semi-structured interviews, focused on key themes related to COVID-19 including development, awareness and understanding of the LDMP pandemic sub-plan, and issues and challenges related to the current pandemic and evidence of application of IKP to pandemic responses including health promotion materials (see Appendix C: First Nations Disaster Management Plans for nCOVID-19 Interview Guide). The face-to-face or phone interviews were recorded by either handwritten notes or digital recording at participant discretion.

5.2.4 Data analysis

Following standard qualitative data approaches (Woods et al., 2016), the data management program NVivo assisted to extract responses to eleven main themes, or higher-order concepts, imposed by the interview framework. Emergent sub-themes were identified using a constant comparative method. These themes were initially verified by intercoder agreement reached between two of the research team on examination of a sample of interviews across a range of stakeholders (community members, local government, and LDMG members).

5.3 ETHICS APPROVALS

Ethics approval for the study was provided by the Human Research Ethics Committee of Central Queensland University (CQUHREC reference number – 22672). Permissions to visit remote communities and towns were obtained from local shire councils. All participation was voluntary and all those interviewed provided written consent, either hard-copy or electronic.

5.4 RESULTS – KEY THEMES AND ASSOCIATED SUB-THEMES

Results reported below are arranged by the key themes imposed by the interview questions, with associated emergent sub-themes which are reported in descending frequency of mention (see Figure 16). Statements, in italics, provided by participants have been selected to provide examples representing themes and emergent sub-themes.

In interviews, there were occasional discrepancies in the knowledge of local pandemic management strategies between community members and LDMG members. However, as noted in our review of plans and sub-plans (see section 4), pandemic sub-plans are not generally available to members of the public, therefore participants’ knowledge of these planning documents and associated activities was varied.

To account for differences in participant viewpoints, attributes accompany the participant statements. These are: Indigenous status (I=Indigenous, NI=non-Indigenous); stakeholder designation code (LDMG=Local Disaster
Management Group Member, LG=local government, CM=community member with no local council affiliations, or Other – Table 9).

Table 9: Participant attributes and their identification codes

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Identification Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigenous Status</td>
<td>I = Indigenous</td>
</tr>
<tr>
<td></td>
<td>NI = non-Indigenous</td>
</tr>
<tr>
<td>Stakeholder Designation</td>
<td>LDMG = Local Disaster Management Group Member</td>
</tr>
<tr>
<td></td>
<td>LG = Local government</td>
</tr>
<tr>
<td></td>
<td>CM = Community member with no local council affiliation</td>
</tr>
<tr>
<td></td>
<td>Other = undefined to ensure confidentiality</td>
</tr>
</tbody>
</table>

To guide the discussion, Figure 16 has been developed as an overview of the key themes and their respective sub-themes. Key themes 1 and 3 stood out as singular topics arising from the data. Key themes 2, and 4 through 8 however, generated a number of sub-themes as shown below.

Figure 16: Key themes and sub-themes arising from the stakeholder interviews

5.4.1 KEY THEME 1: Preparation and responses based on knowledge acquired from past pandemics

Few participants were able to report on this question. Some acknowledged that the current pandemic was unprecedented in its scale, with an accompanying lack of preparation.

“Swine flu [2009 H1N1 outbreak], Hendra, happened before but certainly not to this extent. And they were brought under control reasonably quickly by comparison. But here we are, in our second year of mass community lockdowns and state borders being closed, which they were never designed to be. I think that the memory of things like that [past pandemics] have changed in their application, given that this is quite a unique situation” (NI, LG).

There was an indication that swine flu may have informed responses to COVID-19, but insufficiently:
“(Knowledge) especially from the swine flu. We’ve always had a small part in our LDM Plans about a pandemic response, but probably not in the depth we know it should have been” (NI, LG/LDMG).

Also, there was comment that there had been substantial turnover of LDMG members and that current members may not have dealt with swine flu. Two participants referred to past outbreaks of other disease, with one reference to smallpox at the time of colonisation and later outbreaks:

“In the 70s we had mumps and measles come around. Instead of staying at home, we all had humpies, we called them camps, people were going out in their camps and isolate themselves with their own little families” (I, LDMG).

One participant noted that disaster management groups and community leaders had suggested that more recent experiences, i.e., the early emergence of COVID-19 in a remote location in NSW, could contribute to planning for Queensland:

“Wilcannia is what the LDMGs and DDMGs and mayors have raised at the start of the year – all of them saying ‘Let’s look at those experiences and see what’s to be learnt’ but that remains to be seen” (NI, Other).

5.4.2 KEY THEME 2: Awareness of responsibility for COVID-19 responses

LDMG and/or council members interviewed identified QH as the lead agency responsible for COVID-19 responses. Of the remote community members interviewed, excluding LDMG members, the majority identified both the LDMG and or local health services, including government and community-controlled, as the lead agencies responsible for COVID-19 responses. Only seven community members identified QH as the lead agency but also often stated that this was in conjunction with LDMGs and/or council (leaders of the local LDMGs). Two participants also stated that the responsibility also lay with community members themselves:

“Everyone. We all have our part to play for getting the message out there.” (I, CM)

“Health and hospitals and ourselves. Ourselves – keeping away from parks and crowds and trying to wear a mask.” (I, CM).

5.4.2.1 Sub-theme: Disaster management and pandemic (health) management nexus

Participant comments indicated that the insertion of QH as the lead agency into the existing disaster management arrangements appears to have led to a “top-down” approach and some confusion about roles and responsibilities of health services and LDMGs. The anticipated response of LDMGs and DDMGs as described in Queensland’s 2020 Whole-of-Government Pandemic Plan, would be for them to “move to ‘stand up’ in support of their relevant HHS as the lead agency” although little detail is provided in this document regarding distinct roles and responsibilities.

“My understanding [of responsibility for COVID-19 responses] is QH but they use the LDMG to activate and communicate their plans. But there is some confusion when you ask who’s responsible because when there’s a disaster QFES comes in… but it hasn’t been tested yet, when COVID comes in. Who’s responsible for the response. That’s where I’m confused and I’m sure the

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councils are confused. ... Just say there is an event, QFES deploy, but regarding health, are QH going to deploy staff to help manage? I don’t know.” (NI, LDMG)

“It’s led by QH and there has been some confusion over that to some extent re messaging. Council has opinions at times. The DDMG has sometimes. When there was a decision for local leadership, we’ve been shot down a few times. This is led by QH so there’s a little bit of mixed messaging going on. ... And being told we were the sole decisionmakers and we were being overridden. Even though I would take some issues to the Biosecurity Advisor, the [state] CHO, he’d come back and say ‘OK – minimum risk’ but I had the knowledge of the people who wanted to go and visit the elderly and I’d say no” (NI, LDMG)

A reported lack of clarity regarding operational roles and responsibilities apportioned to QH and LDMGs appears to have contributed to unrealised expectations on either side. This has been particularly with regard to provision of isolation support services and development of locally appropriate pandemic messaging:

“We need help with accommodation, we need help with food, cleaning. So, it becomes a Whole-of-Government response but the technical expertise lies with QH” (NI, LDMG)

“There was a message in place that if there was a person with COVID, that person would be flown straight out but that’s changed of last week. They are going to keep people in the community, so what does that mean? And they don’t have the resources [locally]” (NI, LDMG)

“I sit on DDMG meetings with QH and they ask us what can help them with the vaccination rate and time and time again the mayors and [council] CEOs have given them examples and messages. ... All those same messages we have given to her [the Minister for Health] and we still haven’t seen those messages. That’s my observation in that space of the LDMG and the DDMG, they [the state authorities] don’t listen. ... It’s Queensland Health and Tropical Health Unit, RFDS and Apunipima, all different health delivery services all giving different messaging and not really listening to the LDMG and the DDMG voices” (NI, Other)

5.4.3 **KEY THEME 3: Awareness-raising of local COVID-19 response efforts**

As previously mentioned, COVID-19 sub-plans are not generally available to the public. However, the responsibility to provide messaging to communities about appropriate behaviours and requirements in prevention and response to COVID-19 lies with the LDMGs led by local councils. LDMG members interviewed described council efforts to get local COVID-related messaging out into their communities as most frequently being through existing strategies used for natural disasters. However, there was some uncertainty regarding efficacy of usual disaster messaging practices when used for COVID-19:

“With normal disasters here, we don’t re-invent the wheel ... we have local radio ... social media platforms. ...The town knows there’s a system when things go bad. But we’re so used to floods, cyclones, the normal stuff but the COVID, I don’t think they have the tools to manage it. ... We didn’t know how the communities were going to react to this at all” (NI, LDMG).

Posters in council-controlled areas and constantly updated messaging and links to state health information webpages were routinely used by local governments. Better-resourced communities used distribution of council newsletters and electronic signage. Also, one remote town LDMG reported their development of a stakeholder list for constant electronic distribution of updated COVID-19 messaging. The small size of communities was identified as an enabler of distribution of messages through word-of-mouth instigated by local councillors.
Although most community members were unaware of a LDMP for COVID-19, most identified social media platforms as the main source of COVID-19 response information: “Facebook and council Facebook page – it comes up with daily COVID reports” (I, CM). Another community member noted: “99% of the population are on social media” (I, CM). Local council-run radio in discrete Indigenous communities was the next most-frequently identified source of information: “The radio station had been running programs for COVID-19. It’s very important for my mob for information” (NI, CM). The workplace was identified as another information source, with regular planning meetings and posters: “CDP [remote employment and community development service] is one of the best places for information because people ring up all the time asking for community information” (I, CM).

Less-frequently mentioned were accessing community through special events: “We had a big lunch about 3 months ago and apparently the mayor gave us a speech that made us aware that COVID was on the Territory border. ... It was good of him to let us know about it” (I, CM); “They had a community meeting not that long ago to discuss things and that was a typical community meeting out under the trees” (NI, LDMG), “We [LDMG] even hold stalls down at the shopping centre” (I, LDMG).

5.4.4 KEY THEME 4: Understanding of LDMP arrangements/strategies

Within each of the remote sites visited, there were differing levels of awareness of plans to manage COVID-19 among community members interviewed, although there was general awareness of plans for other natural disasters:

“There’s no plans. Nothing that I know of, not in our workplace. ... We usually get a plan in cyclone time but not for COVID” (I, CM).

“The LDMG are the ones who manage this sort of stuff. But they’re not very vocal with the community about what would happen. Everyone would have a clearer understanding of what steps to take” (I, CM).

“I wouldn’t have a clue. I’ll jump in the car and go bush” (I, CM).

Nonetheless, there was high awareness of social distancing, hygiene and wearing of masks: “I haven’t seen anything written information other than washing hands, personal hygiene, wearing face masks” (I, CM); “You have to be extra cautious, looking after your family and household to keep them safe at home and talking to them about staying away from groups” (I, CM). There was also general awareness of the need to use QR check-in codes to enable contact tracing.

5.4.4.1 Sub-theme: COVID-19 vaccination delivery

Among LDMG and community members in sites visited, vaccination was the most-frequently mentioned local pandemic strategy both prior to and during the emergence of COVID-19:

“The best plans being rolled out by the government and supported by council at the moment is to get vaccinated” (I, LG).

“The main one [strategy] is just trying to push the vaccine – local announcer on radio, the health council on radio, the DM meetings” (I, CM).

“There’s nothing much going on but the vaccine – from health workers and [community-controlled health service]” (I, CM).

The urgency and importance of achieving high vaccination rates was directly associated with pre-existing social conditions:
"Our ill-health is the biggest worry. … The frightening part is so many of our people are already sick. And with overcrowding, it [COVID-19] will spread through here like wildfire. We can deal with that by upping the vaccination rate" (I, CM).

Vaccinations were reported as being mostly provided by visiting services from larger regional centres (state health, community-controlled health services) and a regularly visiting non-government organisations (eg. RFDS):

"QH from [regional centre] do the vaccines, the Public Health Unit. … They've been very good. They've come around ten times. When we had the scare [close contacts entering community] the Rapid Response Team was here the next day" (I, CM).

Comments indicated a lack of appropriately trained local health staff:

"We've got to rely on people to come into town to do the vaccinations. It's not quite as simple as it sounds. … The district Director of Nursing has to be trained to do vaccinations, but you have to be trained to deal with the reactions. That would be an ideal situation" (NI, LG/LDMG).

A further challenge reported was overcoming an initial lack of safe storage temperature facilities:

"They were flying the vaccines out to the islands on a daily basis because they didn’t have the cold chains [appropriate temperature-controlled storage facilities] out there, not yet" (NI, LG/LDMG).

Initial vaccination reluctance was fuelled by misinformation (reported later). However, vaccination uptake was reported to be improved by substantial information and outreach efforts in communities.

5.4.4.2 Sub-theme: Community-specific strategies

As described earlier, LDMPs are developed in accordance with state DM guidelines but there were some mentions of the use of site-specific strategies. These included local councillors accompanying health service staff to talk to people about vaccination out in the community, some provision of incentives for vaccination, and some councils making vaccination a requirement for essential visitors. Other essential state services such as health and police already had mandated staff vaccinations. For communities with mine sites nearby, participants reported the mining companies also required fly-in, fly-out staff be vaccinated.

Following the cessation of the designated closed zones arrangements under the Biosecurity Act (AG, 2021), one community mentioned they had passed an initial council resolution to block all visitors, though there was no legal capacity to enforce that at that time:

"They put up signs on their boundaries saying ‘No Entry’ which we sort of told them they can’t do. … By all means put up a sign that indicates the people entering, by nature of their entry, are indicating they have not been exposed to COVID. But as far as turning people around, you’ve got no legal proficiency or legal capacity to do that" (NI, LG).

Some councils were reported to have requested powers to further limit numbers of people entering their community:

"Quite a few of the communities have requested to the CHO to have additional directives for their community where they can restrict access … or place restrictions or requirements to enter the community. None of that [requests] had been approved as far as I know" (NI, LDMG).

Other community-specific strategies relating to the Biosecurity Act (AG, 2021) will be reported further below.
5.4.4.3 **Sub-theme: Development and review of LDMPs and pandemic sub-plans**

There was acknowledgement that LDMGs were well-experienced in dealing with natural disasters, however limited pandemic experience may have contributed to a lack of confidence and preparation:

> "These guys deal with cyclones on a regular basis. That’s just what they do. COVID scared them. They couldn’t see it and it got more emotive. We had people who were very scared and were making very poor decisions" (NI, LDMG).

> "We were about 5% prepared for COVID" (I, LDMG).

There was focus on development of pandemic sub-plans around the time of the emergence of COVID-19 nationally:

> "We developed a sub-plan pretty well straight after the pandemic. There was a draft provided by QFES, they sent us a sub-plan template and we developed that" (NI, LG/LDMG).

As with general LDMPs, pandemic sub-plans were reported to be subject to annual review although a participant noted that this was dependent on capacity. However the need for review was underlined by the rapidly changing COVID-19 environment: "most of them [sub-plans] need to be reviewed because dealing with COVID it’s just changed so much so quickly that some of them will be out of date" (NI, LDMG); "I guess it’s [the LDMP] still a work in progress ... being new (COVID) and things coming out so rapidly, it was trying to keep up" (I, LG). An example included changes at the state level in decisions to manage COVID-19 cases: "They [QH] were planning around the persons being flown out, and now, if they are going to stay and there’s overcrowding and 15 people per household, how is that?" (NI, Other).

Several LDMG members reported that their state hospital and health services worked to a tiered health service pandemic response system. LDMGs were advised of these tiers directly by health service representatives, who also advised on what support they (health services) would be seeking from the groups. These tiers were described as being subject to some change over the period reported in interviews. Furthermore, the complexity of legislative requirements of LDMG were acknowledged to be a challenge to appropriate LDMP development:

> "The LDMG and DDMG structure don’t really accommodate for local knowledge. It’s structured in a way that the first fifteen pages of an LDMP are about the structure of it and they are not fit for purpose documents for an Indigenous council and community. They are very bureaucratic. They are so big they can’t open them on a website" (NI, Other).

The importance of community voice in decision-making was further remarked on:

> "That was the downfall of previous years, that people made decisions as to what they see as best for the community without getting community input and that made a lot of people angry and nervous and not having an understanding of what was being implemented" (I, LDMG).

Further comment, by the same participant, stressed the importance of provision of assistance with decision-making from outsiders who had local knowledge:

> "You need someone who has been coming into community for a long time and they have a better understanding of community. Because every community is totally different. We might be related to some of the mob up there ... but their cultural ways are different to ours." (I, LDMG)

One participant commented that effective planning was linked to good communication and relationships with council by local services:
“It [planning] appears to be going quite well. The director of the clinic is exceptionally good, and he communicates very well with the council, the LDMG and the police and so they seem to have a very good handle on things. It varies across communities and certainly one of the other community’s council … they have some serious concerns about how it [COVID-19] is being handled. ... Disaster management at any level or event is about good relationships and trust in those relationships you form prior to the event happening” (NI, LDMG).

5.4.4.4 Sub-theme: Arrangements under the Biosecurity Act

Most-frequently mentioned were the roadblocks set up to prevent entry into the discrete communities (designated areas) by police and/or the army:

“Only the community lockdown last year we had the army reserve blocking the roads 24/7. Lots of sneaking around, otherwise they had to quarantine [on return to community] for 14 days” (I, CM).

These arrangements were reported to create significant local tensions and pressures:

“Pressures certainly impacted in the extent that the councils, the mayors, were fighting back on the lockdown to move to a CHO directive in Qld to provide them with some latitude as to what was needed to keep these communities functioning was. ... It wasn’t until they realised the legislation itself was so compelling ... that we were having all sorts of problems, particularly when it came to ‘sorry business’11, that there were massive restrictions in the cultural significance for some of these communities” (NI, LG).

Further problems reported were enforcing the biosecurity arrangements in the Torres Strait region with the Torres Treaty allowing border crossings from Papua New Guinea12. This treaty was reported to be suspended in February followed by action by PNG:

“A little bit later the PNG government decided to close their border I think to assist with that stopping of movement. It’s currently being enforced by the Australian Border Force ... the army was up there for a long time, early in the lockdown. Early in the piece there were still a few boats coming over. They weren’t trying to sneak over but they were getting a bit tight on food in the Western Provinces. It was more for medical care” (NI, LG/LDMG).

This participant reported that QH then made health assessments of ill PNG nationals on arrival with arrangements made for local treatment or transferal to a regional centre as required.

Following the lifting of the Biosecurity Act arrangements, there was a period of rapid transition out of federal-level management of travel in and out of communities. The decision-making processes and responsibilities were transferred to a combination of state and local government actors:

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11 “Sorry business” is described as: “the Aboriginal English term used by the Aboriginal and Torres Strait Islander community to describe the mourning period when a family member dies and all responsibilities that follow in accordance with traditional lore and custom” Queensland Courts [QC]. (2019). Sorry Business - A guide to cultural competency and engagement between the Coroners Court of Queensland and Aboriginal and Torres Strait Islander people. Brisbane: Queensland Government Retrieved from https://www.courts.qld.gov.au/__data/assets/pdf_file/0017/723203/ccq-cultural-competency-guide.pdf.

12 The Torres Strait Treaty is in force between PNG and Australia to enable “free movement (without passports or visas) of traditional inhabitants between Australia and Papua New Guinea for traditional activities in the Protected Zone and nearby areas” Torres Strait Island Regional Council [TSIRC]. (2016). Torres Strait Treaty and Border Movements. TSIRC. Retrieved 01 November, 2022 from https://www.tsirc.qld.gov.au/community-entry-forms/treaty-png-border-movements. Currently there is a ban on cross-border travel under this Treaty until further notice.
"When the relaxation happened though, the removal happened holistically across all the shires with the replacement of a CHO directive regarding leaving and entering Indigenous areas" (NI, LG).

This came with attendant challenges:

“But to throw to the LDMGs and the title of sole decision-maker with the advice of the CHO – they really should have bought in a pandemic specialist into our community to help us. … We were flying by the seat of our pants, and we were being told we were the sole decision-maker and being overridden [by the CHO]. I’d go to sleep at night and hope that the decisions I’d made today that no-one would die from” (NI, LDMG/LG).

5.4.5 KEY THEME 5: Local COVID-19 related issues

By far the most-frequently mentioned COVID-19 related issue was mental wellbeing concerns. Other frequently mentioned issues were the impacts of the Biosecurity Act arrangements, communication and messaging, the impact of COVID-19 on local governments, misinformation, and the impacts on cultural activities.

5.4.5.1 Sub-theme: Social and emotional wellbeing

Comments among community members reflected a great deal of fear. Most-frequently described was fear of receiving the COVID-19 vaccinations:

"Some people are sceptical – blood clots and all that. It takes us years and years to develop a vaccine. It was scary to know that there was this disease and all of a sudden there was this vaccine" (I, CM).

Participants also noted concerns for the elderly and those with chronic disease: “People with sugar, heart disease – I’m worried for them and their reaction to COVID” (I, CM). Also, initially there was strong fear of a high mortality rate associated with COVID-19: "There are heavy stories about people dying so people are scared” (I, CM).

Other commonly reported fears included concerns about transient populations. These included stranded Indigenous homeless people from interstate:

"The majority of people there are probably from the NT. And my biggest fear is that when COVID comes here, they are going to be the most vulnerable group and they will be the most unvaccinated group” (NI, LDMG).

There were other concerns about transient tourist populations in both designated areas and for remote towns with high Indigenous populations and not included under biosecurity arrangements:

"The only issue was with tourists coming in when other communities were locked down. We should be treated like a community … we wanted a lock-down here – there’s a lot of Aboriginal People here” (I, CM).

Further fear was initially expressed about COVID-19 incursion across the national border in Far North Queensland:

"In the early stages, while there was some sovereignty on the borders, there was very much a free-wheeling operation between PNG and those [Torres Strait] islands … and some real concerns about the disease being bought in” (NI, LG).

With lifting of the biosecurity arrangements, travel within Queensland increased:
But at the same time, an increase after the biosecurity and the movement was allowed back in place, we’ve seen massive internal travel from Brisbane with the grey nomads set. … This bloomed travel through places [including discrete communities] people would not usually go. … These communities were never designed as tourist meccas and they jealously guard their traditional values” (NI, LDMG).

The restrictions on the usual movements (both inter- and intra-community) and important ways of socialising based on frequent visiting with other family and community members were thought to have potential impact on social and emotional wellbeing and are more fully reported in the challenges section.

Other wellbeing issues associated with travel restrictions, mentioned singly but significantly, included a report of suicides by two young men in one community which was thought to be due to their exclusion from travelling out of the community to attend work, concerns of an increase in domestic violence associated with families in isolation, and reduced access to previously visiting mental health services. The latter was also mentioned as an issue in terms of local capacity to deal with trauma within communities during the pandemic:

“... everyone was shocked, and people wanted to know what they could do, how we could cope. … We really need to have a space not just for pandemic response but for trauma response” (I, CM).

5.4.5.2 Sub-theme: Communication and messaging

Interviews indicated that there was enormous effort to ensure effective communication between state and local levels of pandemic management:

“I think the government did a good job – they were having weekly teleconferences, I think they still do, with the mayors and CEOs and the Chief Medical Officer is on board and the Minister. A lot of communication which is really good for the communities. They have questions that can be asked and answered, so everybody gets a good idea of what was going on and how things are being dealt with because it was really flying by the seat of their pants when it all started. But slowly things got in place, and they still hold teleconferences every week. It is a big-time commitment – making sure that everybody has got an opportunity to have that communication and there’s more than that. The mayors have one (teleconference) – so they are all talking to each other all the time” (NI, LDMG).

However, there was also an indication that some of the direct communications between state and community leaders may be problematic:

“We had the Deputy Premier having a daily hook-up with the Indigenous council mayors all around Queensland, so completely circumventing the [disaster management] system, making promises to them we didn’t even know about. They thought they were doing the right thing, like one-on-one meetings with the mayors. If we had managed under the disaster management arrangements and stuck to that” (NI, LDMG).

The most-frequently occurring comments related to a confusing, complex, and constantly changing legislative (from federal to state), policy and directive environments for the LDMGs responsible for planning and implementing appropriate responses:

“We were getting directives and we were sitting in a room with three lawyers who couldn’t understand it. So how did the person on the street understand it? … I think the initial confusion was we had no idea of what legislation was going to be operating. Sorting that out, that was the
major confusing element. What act are we working under? What policy are we working under? Stop changing!” (NI, LDMG).

These rapid changes contributed to challenges in providing appropriate messaging at the local level in a timely manner:

“I think the biggest thing is the constant change in what to do and what needs to be done and the communication of that change. That’s not just an Indigenous community thing, it’s everywhere. Rules are changing and how we communicate those changes is sometimes playing catch-up” (NI, LDMG).

State Health messaging processes were reported to be slow compared to more nimble local governments:

“QH has a very convoluted media policy … so for us to get a health message out to the media, you are talking days and weeks even. So, you give the local government the context of what you want to say and we’ll put it into local context and send it out. … We’ve had to use the message but not the medium. The mayors, the LDMGs are all talking the same way but get it out in a different direction” (NI, LDMG).

Local community members also reported that the changes in messages and a perceived lack of information was also confusing and often encouraged fear responses:

“There are too many different information going on in the news, you don’t know who to believe” (I, CM).

“We don’t know if Aboriginal People have died from it. It could be a white fella disease or a city people disease. Up here we got fresh air” (I, CM).

“Now people are trying to make sense of new directives – with testing. We would need a bit more communication to make the requirements clearer. Like what’s the risk for close contacts. To deal with the fear factor” (I, LG).

5.4.5.3 Sub-theme: Border closures, lockdowns, and isolation management

There was some acknowledgement that the restrictions on entrance to communities contributed to a sense of protection from COVID-19: “We felt safe because no-one was coming in. The only things coming in were food trucks. The drivers unloaded and we packed it away” (NI, CM). The enormous task of manning main highway junctions and the state border necessitated some use of non-local police with some attendant problems:

“The police were asked to police the impossible. We had people out on border checkpoints, and they were Brisbane police. This is a complaint that came from the communities: ‘These coppers that you’re bringing in don’t know how to talk to us. They gave someone a ticket for a chipped windscreen.’ We had to use local police as much as we could. We ran out of people. We were flying in 60 a week just to keep the border protection stuff up” (NI, LDMG).

Although short-lived, the restrictions were reported by a wide range of participants to have had significant impacts. People who had travelled or needed to travel out of community, including for health or education reasons, were required to isolate prior to returning to their community:

“We were basically locking people out of their community and putting them into hotel quarantine here and I think we put a couple of hundred people through it … People coming out of prison,
coming out of prison for a couple of years and we’re locking you in a hotel room... We engaged Department of Aboriginal and Torres Strait Islander Partnerships because we had 99% Indigenous clients. Most of them smoke. We had to be flexible about going outside. It was actually a real suicide risk... people just wanted to be outside... locking up people that were used to being outside all of the time” (NI, LDMG).

An additional issue identified was management of towns nearby designated biosecurity zoned communities. To overcome some of the above issues two shires elected to be included in the designated areas due to the close proximity of discrete Aboriginal communities: “Town X opted in, they wanted to be part of the biosecurity area as well, that was their choice” (NI, LDMG); “What happened when the Biosecurity Act came in, there were two communities outside of the Aboriginal communities, with shires that were included in that at the request of their CEO?” (NI, LG).

A further Town Authority also requested to be included in the designated areas as members of the nearby community travelled there to access cheaper food supplies:

“Basically, we were locking our doors to our neighbouring community, which is as good as a suburb... and we got into a biosecurity zone then, which took a whole lot of stress and angst out of the whole COVID situation” (NI, LG/LDMG).

A further community managed access to a regional centre through use of a permit system which had attendant issues:

“Our people had to go to council to get a permit to [go to] town and back [to go shopping]. You were only allowed two in the cars... that was hard, and everyone was starting to get frustrated because us mob, we like to travel in a big mob... We had the army, the police, SES. ... We had a local SES controller and he got abused [enforcing restrictions] when he got back home” (I, LDMG).

5.4.5.4 Sub-theme: Impacts on local governments

Most-frequently mentioned was the impost of COVID-19 related efforts on council staff time, particularly in the support of public health interventions including provision of community messaging for pandemic prevention and response: “There’s been more for the council to deal with – keeping tabs with what’s happening and getting the information out and being COVID aware” (I, LG). These efforts were reported to be associated with stress and exhaustion:

“I think there will be a lot of fear and concern when there’s a case. A lot of the mayors are concerned about the messaging, that they are very concerned and fatigued. They’ve tried their hardest to get people vaccinated but there is just a point where they can’t do any it anymore. So, what they are saying is that they are trying their hardest, but they will get blamed for everything. They are used to that in a way” (NI, Other).

Other impacts on council time included the provision of administrative and community engagement assistance to health services in support of with vaccination efforts:

“Health does the vaccinations, and we support with administration. ...The other night I went down to the oval and cooked sausages for the local people of who many are Indigenous, to try and encourage them to come and get a free sausage and get a vaccination. ...We’ll do anything we can to encourage that” (NI, LG/LDMG).

“The council provides workers to go out in community with them [visiting health services]” (I, LG/LDMG).
Further time was spent dealing with traveller and community COVID-19 enquiries: “in issues that come up for the community or council even, you need a lot of extra resources. One of the council staff couldn’t do their normal job because they were tackling phone call after phone call. ... Back when we were in the exclusion zone, it was ridiculous then I would say at that time we needed two extra full-time administrators” (NI, LG/LDMG). Extra costs were incurred by provision of extra cleaning regimes of public sites and support for those in quarantine: “families who were isolated last year... and other families stepped up. And the council might bring them a feed. ... X [senior local government staff] was dropping off food” (I, CM).

Timely completion of capital works programs was reported to be hampered:

“The price of materials has gone through the roof. So, it’s had a big impact on each community” (NI, LDMG).

“That’s [the shortages] impacting on our budgets and our commitments with money from state and federal governments to finish infrastructure projects within the appropriate periods of time” (NI, LG/LDMG).

There was some indication from participants that these contracts and acquittals could be extended.

Unlike the recovery procedures in cases of natural disasters, pandemic costs incurred by local governments were not subject to reimbursement:

“As it is for every council there is no budget for it. Anything the council is doing or putting in place, whether it’s in areas in southern Queensland where they’re providing resources to close borders or other Indigenous communities where they might be supplying power cards for free or phone credit cards or free transport or whatever. That is all at their cost. There is currently no way of recouping that and when you have an Indigenous community that has no income, no rates base other than a rates base allowance that comes from state government, that’s a big issue. We have yet to see a flow-on effect from that” (NI, LDMG).

5.4.5.5 Sub-theme: Misinformation

Much effort was reported to be made by local councils to combat the enormous amount of misinformation, particularly associated with vaccination effects, circulating in communities mostly through social media:

“And some of the rumours going around are so farcical, people don’t want to admit they believe, like the story that you become magnetic [after vaccination]. They [council] had to put out some media stuff to say it doesn’t. You can’t keep doing that – saying it’s not true” (NI, LDMG).

“There is a lot of fear, social media has played a terrible role around vaccination and myths around COVID. ... The mayors say there are a lot of young people that say they’ll be fine, and the mayors say ‘Well, what about your family, your elders. You must think of them’” (I, LG).

“I thought all the silly things, like drop dead, get allergic reaction. I was against it [vaccination] from watching the news and Facebook. It really poisoned my mind that the COVID needle wasn’t good for you” (I, CM).

Other misinformation reported prior to the emergence of COVID-19 in the communities included that COVID-19 was a “white man’s disease”, a “city disease” or that COVID-19 would not infect those who were physically fit, that the vaccination contained “a chip, like the Mark of the Beast or for tracking you”, or was “white man’s medicine”, causing
impotence, or death six months afterwards. Some vaccination reluctance among youth was reported to be overcome by concerns about travel and entry restrictions for the unvaccinated existing at time of interview.

Additional concerns reported for some participants were ascribing the vaccine mandates the same as colonisation and their responses were based on historical mistrust of government:

"Also, around the history repeating itself ... there were a lot of people from the Stolen Generation concerned about what that messaging meant and what that was going to do to their freedoms. It wasn’t so much about the messages but more around concerns that this might be a way to do what was done in the past. And a lack of trust in the government because of what’s been done in the past" (NI, Other).

Reported efforts to combat this misinformation locally included a public forum led by a local doctor and use of local council websites and local radio to transmit government health messaging.

5.4.5.6 Sub-theme: Impacts on cultural activities

Less-frequently mentioned but important due to the rapid implementation of travel restrictions under the Biosecurity Act, border closures, and social distancing mandates, many people were prevented from undertaking cultural activities such as attending to “sorry business”, (i.e., responsibilities and obligations associated with mourning). This impacted on travelling to funerals outside of community and was also compounded by general state restrictions on numbers attending local funerals:

"It wasn’t until they realised that the legislation itself was so compelling as far as lock-in, lock-out situations, that we were having all sorts of problems, particularly when it came to sorry business, that there were massive restrictions in the cultural significance for some of these communities” (NI, LG).

"Growing up in small communities, everyone knows one another and everyone wants to show their respect, even if you don’t know them very well” (I, CM).

"There will be mental issues. Like restrictions on attending ‘sorry business’, distressing for the family members of the deceased” (I, CM).

Other cultural activities affected were hunting and fishing:

"Early on was the inability to move about. There was a lot of issues around from people stopping doing their traditional things like hunting which wasn’t what they were trying to stop. They were trying to stop people going from island to island” (NI, LG/LDMG).

Another participant noted:

"If COVID wasn’t around we would have gone out bush things – getting bush medicine, have a cultural thing going” (I, CM).

"We wanted to go fishing one time but they stopped us anyway. I don’t think border control was done right at the time” (I, CM).

One participant expressed frustration that that cross-border restrictions prevented access to his traditional country:

"My ancestral homeland is five hours away across the border. I want to be able to travel there any time I want, and no government rules or policies can stop me. They don’t have the right” (I, CM).
Other less-frequently mentioned COVID-19 related issues included some impact on availability of essential supplies, complacency attributed to the non-emergence of COVID-19 at the time of interview, and a reduction in formal social events. Negative economic impacts were reported on local businesses in small towns, especially those targeting tourists and, in one region, on traditional seasonal fishing enterprises due to lack of market access.

5.4.6 KEY THEME 6: COVID-19 related challenges

Perceptions of lack of capacity to deal with the pandemic were the most-frequently mentioned challenges, followed closely by socio-economic challenges. Less-frequently mentioned sub-themes included cultural challenges and vaccination rate estimation.

5.4.6.1 Sub-theme: Lack of capacity

Contrasting with previously reported comparatively sufficient capacity to manage natural disasters, there was some perception that there was not sufficient local capacity for pandemic management:

“The town knows there’s a system there when things go bad. We’re so used to floods, cyclones, the normal stuff but the COVID? I don’t think they have the tools to manage it” (NI, LDMG).

“We’ve been fortunate we haven’t had any cases. And that we don’t have the resources – it’s a state government issue” (NI, LG/LDMG).

“We know the answer [to manage an outbreak] and it’s ‘NO’. Council does play a part in it but we don’t make the final decisions to manage it. I think maybe more from QH would be helpful especially the education process in the community” (NI, LG/LDMG).

The capacity to provide sufficient local isolation sites was a major concern:

“So, if someone was sick, where would they go – isolation. But then there’s mixed messaging in that also because last year when they [communities] identified isolation sites, they didn’t tick all the boxes” (NI, Other).

Another participant noted:

“What we have had was a big barrier with accommodation for isolation. At the moment we have self-isolation at home. ... The [council] guesthouse was earmarked. There wouldn’t be much space if there was an outbreak” (I, CM).

Further concern was the existing limited capacity of local health care services:

"With our hospital there is only one doctor and no doctor at our local Aboriginal Medical Service and there’s only a nurse practitioner there. What are they going to do?” (I, CM).

“We’ve got a clinic that has a nurse practitioner and the Director of Nursing and then the RFDS visits once a week or fortnightly – that’s when the doctor visits. ... When they come, they are quite busy and over-filled” (I, LG/LDMG).

5.4.6.2 Sub-theme: Socio-economic challenges

Most-frequently mentioned was the existing disadvantage in remote communities including high rates of chronic disease, crowded homes, and the high cost of locally purchased food:
"And when we’ve got 10-13 people in a house. ... I’m not so scared now because of the rate of vaccination but I’m still worried because of our rate of chronic disease. It’s way high, and with overcrowding…” (I, CM).

"Some of the people are tapping into their electricity credits for essential stuff like food. That’s sad because what they are getting today is not livable. You are doing your shop down at the store and the next day you are penniless. Talking about the prices. You can walk into [stores in a regional city] with $100 and walk out with a trolley full and you can go to the store here and walk out with one bag” (I, LDMG).

5.4.6.3 Sub-theme: Cultural challenges

The importance of social interactions in communities was most-frequently mentioned as a challenge in this sub-theme:

"I go to visit family in different houses every day. Not everyone stays in one place. No isolation” (I, CM).

"It’s very hard to break culture. Togetherness of family ... Maybe we will see some struggling going forward when people aren’t able to do their thing ... When you’re not bringing people together to have a yarn and seeing how people are going and you are locked in your home out here. There are cultural events, our community events all being put on hold and has stopped that interaction between people, social support type events” (I, LG/LDMG).

As previously mentioned, the impact on sorry business was noted as a challenge:

"When there were funerals, people might have struggled to attend because of the rules – only immediate family. ... They [people] like to pay respects in person. And other things like kids’ 18th birthdays and weddings” (I, CM, Local).

Also noted as a challenge was the cultural impact of early restrictions in movement as previously reported:

"The biosecurity restrictions put in place affected people’s ability to go on country which then had carry-over mental health impacts” (NI, Other).

5.4.6.4 Sub-theme: Vaccination rate estimates

Leaders of both remote towns and Aboriginal Shire Councils expressed concerns regarding the under-reporting of vaccination rates in both actual numbers and population percentage estimates:

"We’ve just got some stats from the clinic and out of 184 ... 164 (approximately 89%) are double-vaccinated. Yet other data from QH says we are under 50%” (NI, LG/LDMG).

Another participant noted that "QH were advised at that forum [of community leaders] that their statistics are grossly under-reported” (NI, LG). The reported response by the acting state CHO was to undertake a review to identify causes for variations. Participants postulated several reasons for the discrepancies including use of multiple databases:

"Depending on who it is, Tropical Health or QH, their two databases don’t work together, and they are finding it hard to combine the data they are working on which is weird because it goes through Medicare [publicly-funded universal health care insurance scheme in Australia]” (NI, Other).
A further challenge noted with Medicare was the recording of incorrect residential addresses due to lack of updating by individuals: “if you are living in the Cape but your [Medicare] card address is in Cairns, it [vaccination] is being reported in Cairns … and local rates may be slightly out” (NI, LG/LDMG). Highly mobile populations were also noted to pose a challenge with accurate population estimates:

“We’ve got a lot of transient population here, so it’s hard to know what the real population is. So [regional health service] have got this figure which they’ve got from somewhere, probably an old census and censuses aren’t accurate here, a lot of people don’t fill them out” (NI, LG/LDMG).

Other less-frequently mentioned sub-themes included misinformation (also identified as a major issue and previously reported), connectivity and remoteness in terms of poor communication systems/services, and complacency among community members regarding the need for vaccination due to non-emergence of the pandemic in remote regions at the time of interview.

5.4.7 KEY THEME 7: Application of Indigenous knowledges and practices to COVID-19 responses

Few participants in the study reported any First Nations knowledges or practices being utilised in the pandemic management or communication. While the source of health promotion information related to COVID-19 was widely acknowledged as QH, participants did reiterate that existing local messaging strategies regarding knowledge-sharing were used and seemed appropriate as reported below.

5.4.7.1 Sub-theme: Respected, trusted role models/messengers

While participants reported no new information in terms of inclusion of Indigenous knowledges and practices being used in pandemic messaging, they reiterated and reinforced the importance of commonly used principles in health promotion messaging. Participants noted the critical importance of the involvement of known, trusted and respected First Nations People as appropriate mediums of messaging (including Indigenous sports stars and/or local leaders) to either act as role models or convey messages both locally and regionally:

“Getting some of the TOs [Traditional Owners] involved and getting the messages out” (NI, LG).

“They’ve taken photos of the mayor and community elders having their vaccination and put them around community, so they’re trying to get the message out through their leaders” (NI, LDMG).

“Our nephew was on one of the posters – a constant reminder. He was one of the first to get the jab, he works in health. It was shared on Facebook and everyone saw it. Having a local person – that gave me the courage to get this jab” (I, CM).

5.4.7.2 Sub-theme: Tailored targeted messaging

Providing tailored, targeted, messaging was deemed particularly important in those regions and communities where English was the third or fourth language, although only one council described their efforts to do this:

“Probably one of the biggest things we [LDMG] done is targeted messaging, correct languages. … We’d dot point what key things that had to be put out and get our staff to speak it [in local language] and record it and do a little video of it. … With the communications, the stuff we have translated for our region has worked very well” (NI, LDMG).

Another participant suggested that having a message presented by an Indigenous person but speaking in English was considered insufficient: “While you have a black person’s face, they’re actually speaking English. If it was in local
language – that suggestion was made and that still hasn’t happened” (NI, Other). Written messages were advised to be kept simple and brief.

5.4.7.3 Sub-theme: Face-to-face interactions

In-person opportunities for knowledge exchange between community members and well-known health professionals were favourably reported:

“One of the local nurses, if anyone wanted any information, they’d just ask her. They’d go to the hospital, or she would go around and talk to them about it at home. … With [the nurse] local knowledge and being a local person, Indigenous, everybody listened to what she had to say” (NI, LDMG);

“Locally known people is probably the biggest thing” (NI, LDMG).

“Doctors and nurses came into our work and listened to our concerns. We picked her brains, then we considered vaccination. She had an answer for everything and answered all our concerns” (I, CM).

“They got the message out by talking. A lot of people can’t read or write. … You have to spread the word. Fliers wouldn’t work” (NI, LG).

Other oral messaging strategies were described as follows: “For health information we had a person on local radio, even driving around in a bus with a loudspeaker, getting the message to the whole community … we had open meetings in the parks” (I, CM).

Other media such as local radio with presentations by health professionals, regional television ads and posters tailored to Indigenous Peoples were well-regarded by some:

“There were [community-controlled health service] ads on TV that send messages to Indigenous People. QH had different posters catering for Indigenous Peoples. They kinda caught my eye – they had Indigenous artwork” (I, CM).

The use of culturally capable Indigenous health promotion professionals and local Indigenous organisations in the development and dissemination of messages was considered to be key.

Perceptions regarding the efficacy of health promotion messaging was however, varied. Positive responses were commonly associated with high local vaccination rates. Television and council social media health promotion efforts were also noted to be impactful: “There’s lots of people that watch TV and went to get the jab” (I, CM). Negative responses were associated with a range of reasons including anti-vax stance of some councillors (although this was reported to be rare), widely spread misinformation on social media, and the early state government efforts that were initially poor but improved over time due to appropriate local dissemination strategies:

“The Aboriginal communities have got more of a unique process for getting information out and I think that has been working better. … I think the changes with the more recent material has been good because it can be purpose built [to local community]” (NI, LDMG).
5.4.8 KEY THEME 8: Ways forward to ensure inclusion of First Nations’ knowledges into COVID-19 health promotion information

As reported previously, the LDMGs have played a significant role in the tailoring of state-sourced health promotion messages with resultant positive impacts on perceived ways forward for better health information delivery and responses. Recommendations for the ways forward are reported below.

5.4.8.1 Sub-theme: Key stakeholders

Across participants there was firm opinion that elected community leaders, particularly with some mention of community elders, should be involved in the next steps towards ensuring inclusion of IKP. In addition, there was a recommendation that LDMG pandemic subcommittees should include local influencers:

"COVID’s different – you need to increase the buy-in for your LDMG. I hope it doesn’t look like your traditional LDMG. We’ve let the guys go and identify who are the influencers in their local community and engaging with them. … There is fatigue with it, sick to death of eight different NGOs or government orgs pushing different messages they’ve never seen before. I don’t know the communities well enough to say what is a good model there. They’re the ones who will come up with a good model for them” (NI, LDMG).

Previously reported examples of application of IKP were largely reiterated, with oral messaging provided by community outreach:

"You’d be better off having someone go out there into community and have a chat, tell a story instead of a written pamphlet with a bunch of Indigenous artwork on it so you’ll accept it straightaway” (NI, LDMG).

There were some calls for greater involvement of public health units with cultural capability in state health, and also community-controlled health services:

"QH has a very big Indigenous unit, and there are lots of Indigenous health promotion units and health units like [community-controlled health services] that are fully functional health units. So, I would see them as the lead agencies to do that” (NI, LDMG).

Further comments indicated that greater capacity for developing appropriate health messages lies within well-funded health services:

"I think that the thing in this is that it’s a health response. The state has more resources than the local government, and its health’s [Queensland Health] responsibility to get the information out to the community” (NI, LG/LDMG).

5.4.8.2 Sub-theme: Processes

Involvement of First Nations Peoples in the development of policies and strategies was noted to be imperative:

"They [First Nation Peoples] need to be part of the process and rather than having these reams and reams of policy and law, we sit down with communities and … say, 'This is what we want to achieve, how do we do it and what do you want help with?' Which is disaster management 101 – we don’t tell them how to do it and them coming up with the processes for their community. … Someone sitting in Brisbane Parliament House thinking they know what’s best for Indigenous communities and we saw that with the initial parts of COVID” (NI, LDMG).
The importance of local input to ensure appropriately tailored messaging of state-sourced information was also stressed: “It has to be [done locally] so we don’t have a repeat of some of this rubbish that’s coming out aimed at two-year-olds” (NI, LDMG). To inform local efforts, a few participants referred to the weekly teleconferences between state authorities (CHO and Premier) and local mayors and councillors as a contribution to inclusion of IKP:

“And basically, it’s been an opportunity to be given the specific information about what’s needed. They can go back to their CEOs and say this is what the CHO wants of us, and they can get the information together” (NI, LG).

However, there were concerns expressed that the advice of community leaders in general had not always been heeded:

“They have spoken directly to the [state] Health Minister and have said ‘You should do this,’ but it hasn’t been put into place yet. … They know what to do but they are not being listened to” (NI, Other).

Existing Indigenous knowledge exchange processes for general health promotion were also referred to:

“There would be knowledge around health generally and using the organisations and methods they’re using now is the best way to respond to COVID. … I think Indigenous People using icons, well-known people in community, to spread the message or engage with the community” (I, LG).

Examples of health messaging as previously described as already in use, were reiterated.

5.4.8.3 Sub-theme: Specific information requested

Responses about ways forward for inclusion of IKP with local First Nation community members mostly involved many requests for further specific COVID-19 information about:

1. **Vaccinations.** "Health system are coming up here and telling us to get the needle but they are not giving information about the needle."
2. **The source of the disease.** "A lot of people want to know how it started – with the wet markets in China? Because of conspiracy theories, because if it doesn’t go down in history, it will happen again."
3. **Infectivity and degree of contagion.** "We want to know how you get it. Cos some people are positive and others close to them are negative."
4. **Signs and symptoms of active infection.** "We’d like to know how a person is positive – like a pamphlet with some of the symptoms you can look for so we can read about that. Everyone can read. Use big letters so old people can read it too."
5. **Disease progress.** "Are there stages of COVID – like when you go from green, to yellow, then red?”, "All I know is COVID has three strains. It affects your lungs, that’s all I know. I want to know more. If we explain it to people properly then they won’t be so scared."
6. **Long-term impacts.** "We want to get information on the long-term effects."

5.5 SUMMARY OF THE STAKEHOLDER INTERVIEW FINDINGS

The participant responses indicated that local-level management of natural disasters such as floods and cyclones has worked adequately, with many strategies in place to get timely messages out to community members. However, management of the current pandemic disaster has been challenged by a complex legislative and policy environment and the rapidly evolving and sustained nature of the pandemic. Significant challenges and issues identified included:

» **Perceived lack of local preparation and capacity.** Despite First Nations Peoples having been identified as more likely to experience severe outcomes from pandemics, this research indicated that knowledge
acquired from the 2009 H1N1 pandemic, and also the earlier emergence of COVID-19 in remote communities in NSW, had probably not been applied to preparation for the current pandemic in Queensland. Further, pandemic sub-plans prepared by LDMGs in response to the pandemic were acknowledged to be in varying stages of readiness for the event, with many lacking appropriate levels of detail. This indicated some issues with the required review status of such plans. Despite the enormous efforts by LDMGs, there was perceived lack of community capacity for pandemic management, with particular and frequent mention of the scarcity of appropriate isolation facilities, and the existing limited capacity of local health services. Original pandemic response plans proposed evacuation of positive COVID-19 cases to larger regional sites that are better-resourced to manage acutely ill patients.

» **Rapid imposition of the Commonwealth Biosecurity Act.** The Biosecurity Act directive limiting access to designated First Nations communities for a few months was well-recognised by participants as a successful effort to protect populations at greater risk from the impacts of COVID-19. However, enforcement of these and other internal state travel restrictions also led to local tensions and pressures on local leaders. All restrictions on community member movements resulted in unintended impacts on cultural activities. These included limited access to traditional pursuits such as hunting and gathering on country and attendance to “sorry business” (where there are cultural expectations for attendance), and limits on the usual daily social interactions such as visiting family members. These restrictions were perceived to have potential for negative impacts on social and emotional wellbeing.

» **Disaster Management/Pandemic Management nexus.** The designation of QH as the hazard-specific lead agency in pandemic management, with indications of a top-down approach, tested usual state disaster management arrangements. This would appear to be an inversion of existing disaster management arrangements where state and district DM groups have a focus on directing their effort to supporting local efforts. There were indications of overriding of community voices by the state CHO in some decision-making. A reported lack of clarity regarding operational roles and responsibilities apportioned to QH and LDMGs appears to have contributed by unrealised expectations on both sides.

» **Mental wellbeing.** Aside from the impacts of travel restriction impacting on cultural activities, further impacts on mental wellbeing were mostly reported to be related to widespread fear arising from vaccination concerns, uncertainty about level of risk, management of transient populations, and concerns regarding a potential increase in domestic violence. There was also a report of suicides thought to be related to travel restrictions. At the same time there were concerns related to a decrease in visiting mental health services.

» **Vaccinations.** These were reported to have been provided by visiting health services teams, strongly supported by local governments. However, there was slow uptake of vaccinations prior to the regional emergence of COVID-19 and this was perceived to be due to misinformation and complacency. Eventually, improving vaccination rates were noted to be more effective as a result of using thorough, community outreach approaches. However, concerns were expressed by community leaders regarding the under-reporting of vaccination rates. Underestimation of vaccination estimates at the state level were thought to be associated with the use of multiple databases, incorrect population estimates, and outdated residential addresses on file for some of those vaccinated, attributing vaccinations to other locations. These concerns resulted in state-level commitment to a review of data collection processes.

» **Effective communication and messaging for communities.** This was hampered by rapid changes in pandemic progression, accompanied by shifting policy responses. These changes posed huge challenges for LDMGs responsible for planning and implementation of appropriate responses at the community level. While there were well-intentioned efforts to ensure effective direct communication between state and local levels of pandemic response, some concern was expressed regarding circumvention of usual disaster management communication processes. Further, the timely dissemination of appropriately targeted public
health messaging to community members in a rapidly evolving environment was reported to be hampered by QH’s complex media policy. There were some positive reports of such messaging developed by state health and also Aboriginal Community Controlled Health Services. However, a great deal of the burden of immediate efforts to appropriately tailor and disseminate public health messages fell on local governments and their LDMGs, already struggling to combat huge amounts of misinformation, circulating mainly through social media, and mostly related to perceived risks associated with vaccinations. Some participants expressed the view that this messaging was more the responsibility of better-resourced state- and community-controlled health services.

» Over-stretched and under-resourced local governments and their LDMGs. As well as local efforts to combat COVID-19 misinformation, local governments and their LDMGs were already burdened by provision of updated travel information and permits, administrative and community engagement support of vaccination efforts, extra cleaning regimes for public sites, and substantial social support for those community members quarantined in their homes. Further issues for these remote local governments included delays in completion of capital works programs due to cost increases of materials and skilled labour shortages. As noted by participants, pandemic-related costs, yet to be assessed, are not eligible for reimbursement under current disaster management cost-recovery arrangements.

» Challenges for these remote communities mentioned in the socio-economic domain. Further challenges included existing high rates of chronic disease, overcrowded housing, poor digital connectivity, and the high cost of locally purchased food. Access to cheaper alternatives outside communities were unavailable under the short-lived biosecurity arrangements. To assist with supply access, two remote townships reported they elected to be included in the designated restricted areas due to the close proximity of discrete Aboriginal communities, and another community developed a permit system for travel to a nearby regional centre. However, there were some reports that essential supplies were generally available in communities that were well-practised at managing long periods of isolation during seasonal flooding.

» Evidence of application of Indigenous knowledge practices. To apply IKP to prepare for, and respond to, pandemics was an important line of enquiry in interviews. Responses were limited to evidence of IKP to health promotion messaging with provision of examples such as the use of respected and trusted role models/messengers. Tailored, targeted messaging was considered to be important particularly in those areas where English was the third of fourth language. Further, provision of face-to-face opportunities for community members to discuss specific queries with health professionals, especially those where there was an existing relationship, were particularly important. Media such as local council-run radio stations and Indigenous TV channels were generally well-regarded. The efficacy of health promotion messaging was reported to be indicated by higher rates of COVID-19 vaccination. In summary however, this line of inquiry into IKP in health promotion messaging and in pandemic management produced little new knowledge through the interviews.

» Future efforts to include IKP in pandemic health promotion information. Suggestions included recommendations that community elders and public health units with cultural capability be more involved in message development. Further, the importance of local input and community voice into policy and strategy development was stressed. In response to queries about these future efforts, community members generally put forward requests for more specific information regarding the global source of COVID-19, methods of infection, signs of infection, management and long-term impacts of the disease, and vaccination.

There were strong indications of a lack of pandemic preparedness (in part due to lack of application of learnings from past pandemics), and limited capacity to respond. Pandemic responses incurred a huge impost on local governments already disadvantaged by remoteness and limited financial and human resources, and with no opportunity to recoup
some of the associated costs. There were indications that the change to usual state disaster arrangements with the inclusion of QH as the lead agency led to a top-down approach. This suggests a review is needed of collaborative health and disaster management efforts, with clearer expression of roles and responsibilities to ensure effective and efficient responses at the local level including greater inclusion of community voices.

5.6 LIMITATIONS OF THE STAKEHOLDER INTERVIEWS

Limitations of the stakeholder interviews were as follows:

» The interview responses here are based on perceptions rather than objective measurements. Nevertheless, the responses provide a snapshot of views in a particular and rapidly evolving context.

» Due to the required lengthy ethics application timeframes and project time constraints, key stakeholders in pandemic management not interviewed in this research component were health and police staff. Perspectives were obtained mainly from local government and LDMG members, including emergency service representatives, and community members during site visits.

» Restrictions on entry to communities due to the imposition of the Biosecurity Act and border closures, impacted severely on the proposed geographical scope of this component i.e., across several jurisdictions. In the face of these restrictions the decision was made to limit this research to Queensland only.

» The emergence of COVID-19 in prospective sites for interviews precluded face-to-face engagement with many community stakeholders.

» Engagement with prospective participants identified in stakeholder mapping was limited by their lack of availability for interview due to their focus on management of current natural disasters such as cyclone and flood events at the time of proposed interviews.

» Self-selection of participating local governments and opportunistic recruitment in communities across only a portion of Queensland remote sites therefore limits the generalisability and representativeness of results.

6 DATA SYNTHESIS & CONCLUSION

The COVID-19 pandemic continues to create extensive disruptions to communities and economies globally. However, as noted by the WHO and other bodies worldwide, Indigenous communities are particularly vulnerable to both the risks of the disease itself, and the global fallout from economic disruption and downturn. While it is noted that Australia has arguably fared well in the crisis due to our unique contexts and capacities, communities across Australia are still feeling the multi-layered impacts of the pandemic. Even given the commonalities for impacts associated with Indigenous communities globally, Australian First Nations regional and remote communities have exceeded expectations in their capacity to weather the COVID-19 pandemic.

This study sought to investigate the capacity of regional and remote First Nations’ Communities and their associated local governments to develop and deploy pandemic disaster management strategies and plans. We aimed to evaluate the extents to which regional and remote local governments for Indigenous communities have incorporated responses to previous pandemic disease outbreaks to prepare for COVID-19 through:

» Gaining an understanding of what is required for community preparedness for addressing the COVID-19 pandemic.

» Evaluating feasibility and effectiveness in controlling COVID-19, of implementing disaster management plans in regional and remote Indigenous local governments and shires.

» Providing recommendations and feedback to Indigenous local governments on ways to improve alignment and/or to adapt existing strategies to national and state pandemic and COVID-19 plans.
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» Providing health promotion and health literacy information about ways to control COVID-19 that can be locally developed, that links to the social, cultural, and economic conditions of regional and remote First Nations communities for pandemic disasters.

Two key research questions underpinned this project:

1. What are the issues, challenges, and recommendations for implementing effective local disaster management planning for First Nations Communities in regional and remote Australia to achieve appropriate and successful responses and recovery for pandemic disasters?
2. How does health information within First Nations Communities inform preparation, preparedness, response, and recovery (PPRR) for pandemic management?

6.1 RESEARCH DESIGN SUMMARY

To respond to these research questions, the research design incorporated:

1. An extensive review of literature that aimed to understand current knowledge on each of the two research questions (presented in section 3 Literature Review).
2. A desktop analysis of LDMPs and pandemic sub-plans, to investigate current knowledge on regional and remote Indigenous community preparedness and knowledge of disaster management as a baseline for further discussions with key stakeholders (presented in section 4 Desktop analysis: Local government pandemic & disaster management plans).
3. Key stakeholder and community member engagement data and information-gathering through qualitative individual and/or group interviews with local government representatives, disaster management group members, community members, and other key disaster management stakeholders (presented in section 5 Key stakeholder & community engagement).

We present a summary of each of each of the study components, followed by recommendations made on the basis of synthesis of these findings.

6.2 FINDINGS FROM THE REVIEW OF THE LITERATURE

The review of literature incorporated three phases to cover the broad range of information relevant to establish the background contexts for the study and to understand current knowledge on the two questions. While our focus was on First Nations regional and remote community experiences and practices, it must be noted that the findings from the study highlighted issues and challenges for Australian Indigenous communities that would be common experiences across many/most communities within Australian society. It was difficult to clearly define a narrow scope for the review process, so a semi-systematic, rapid review process was developed and utilised to canvass as much available literature using limited human and time resources.

6.2.1 Key findings from review of disaster management literature

» The situation around COVID-19 is largely unprecedented in terms of scale and costs globally and has obviously presented a significant period of rapid adaptation and learning for governments and communities in how to prepare for, and respond to, pandemics. However, the challenges are further exacerbated in that it appears that learnings gained from prior pandemic and/or infectious disease disasters have not been appropriately assessed or actioned. This is evidenced at the federal level and subsequent state and local government level DMPs by the ongoing lack of consultation and consideration of First Nations regional and remote community contexts (see section 4.3 of this report). The harsh consequences of the lack of action is sadly and dramatically exposed by the disastrous situation.
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experienced by the community of Wilcannia, north-western NSW; (see for example: Allam, 2021, “Wilcannia Covid outbreak: leaked letters show federal government was warned last year of potential catastrophe”).

> There is ample evidence of a long history of data collation and knowledge development of natural disaster management generally, but there is not yet a body of evidence on pandemic disaster management and the intersections of these two areas. The hasty development and insertion of pandemic disaster management into the other more established processes has been clumsy and often not in the best interests of communities. Much learning needs to be gathered and evaluated to enable better preparation and response to future pandemic disasters.

> What is evident from this review is that communities were largely left to develop their own approaches but with the added layered complexities of state and federal health directives. This top-down approach is not in keeping with the priorities of the Sendai Framework for Disaster Risk Reduction (UNDRR, 2015) and/or the rights and goals for self-determination for First Nations communities.

> Indigenous community engagement and the use or inclusion of Indigenous knowledge practice was not evident in the review of available literature.

6.2.2 Key findings from review of health promotion literature

> The review of the health promotion literature demonstrated that a great deal of the information about communication and health messaging with First Nations communities is already quite well-understood and is evidenced through the available literature. There is a great deal of research evidence suggesting that actions that need to be taken include:
  a) developing targeted, tailored messaging, using local community people/influencers and networks;
  b) providing community meeting spaces and functions to enable face-to-face discussion and information dissemination;
  c) developing audio and visual promotion materials in local languages where necessary; and
  d) ensuring community voice is sought in the development of materials.

> However, while there is knowledge about the actions to take, there are operational considerations that require further development. How do local governments implement operational messaging strategies and how do other community sectors (such as the public health services and the Aboriginal Community controlled health providers) all interact and collaborate? It is simply not feasible to relegate the burden of these activities to local government teams as they are already working to capacity to solve operational issues (such as ensuring food security, for example). The perception is that state and federal level health services have funding to respond to the rapidly changing situations, but this funding is not well allocated to collaboratively support regional and remote communities in covering and/or recouping costs of pandemic management.

> Collaboration between state hospital and health services, the ACCHOs and local governments needs to be much better organised and simplified.

> Where communities and local governments had specific health queries, these need to be better documented and prepared for in advance of the next pandemic. A knowledge bank needs to be developed to ensure these preparations are in place long before the next pandemic.

6.3 FINDINGS FROM THE LDMP DESKTOP ANALYSIS

With the analysis of the LDMPs of 82 local governments and regions across Australia with higher numbers of First Nations residents, the principal findings are:

> Pandemic sub-plans were largely unavailable for review, with many only actually being developed during 2020 in reactive, knee-jerk, response to the arrival of COVID-19 pandemic.
Pandemic sub-plans are also usually not made available to community members—they are considered only as government or bureaucratic documents that do not provide useful, usable, accessible information for community members who are usually at the forefront of the pandemic.

These sub-plans, and the parent documents, the LDMPs, appear to be largely not written with sufficient prior knowledge of First Nations remote and regional community contexts. They are templates to be constructed/completed often with little or no relevance to the community or contexts of the local government area. Reliance on templates in the development of plans and sub-plans may not fully account for local contexts such as specific geography, resources and level of remoteness.

There was also very little evidence of wider community engagement or inclusion of Indigenous local knowledges or practices with few of the LDMPs showing any significant level of wider community engagement in their development. While this is perhaps less surprising for pandemic disaster management planning and strategy development than for other natural disasters, (given the need for medical expertise and the rapid pace of the spread of COVID-19 itself), overall, there is no real evidence in the documents of any recognition of First Nations cultural needs and concerns.

Local government representatives also noted that LDMPs and pandemic sub-plans were understood to require annual review and this was often not happening due to lack of capacity in local government (availability of time and resources). However, it is now also evident that this review of pandemic sub-plans, needs to have representation from various sectors of the health services. Representatives from ACCHOs and state hospital and health service providers need to be active in the development of these strategies for futureproofing Australian First Nations Communities with appropriate preparedness and response capacity.

Further research needs to be engaged to develop and evaluate the processes and outcomes from pandemic disaster management in First Nations communities globally.

6.4 FINDINGS FROM KEY STAKEHOLDER ENGAGEMENT INTERVIEWS

Findings from interviews and conversations with key stakeholders in the disaster management planning area have highlighted a concerning lack of preparedness for pandemic response by local governments in First Nations regional and remote communities. There appears to be no application of knowledge acquired from previous pandemics. Further, there are many unclear and confusing relationships between local DM groups, DM state-based organisations (such as police and fire and emergency services) and health services (such as state hospital and health providers and ACCHOs) that require much more detailed examination. It is this nexus between these various agents that must be much better understood to ensure timely and collaborative functioning in future pandemic situations.

Community representatives reported they felt they had been largely left to their own capacity to deal with the daily and ongoing consequences of the pandemic. Community members had to manage and support others with acute illnesses, disabilities, and the elderly, and they needed to do so without adequate access to supply of health services and protective equipment. Despite these overwhelming challenges, regional and remote First Nations communities have managed to support their isolated families while managing their own responses to the levels of social fear and risks of personal exposure.

The key stakeholder interviews revealed eight intersecting issues and challenges that faced First Nations communities in regional and remote Queensland locations.

1. **Biosecurity restrictions** on inter- and intra-community movements both provided a measure of protection for communities, and had negative impacts on cultural activities and access to country.

2. **Communication and messaging** of pandemic responses and actions was confusing, often not provided in timely or useful forms, and in many cases actually lacking to the point of local governments needing to
develop and deliver their own communications without the addition of supports required from state health providers.

3. **Misinformation** around the vaccine, vaccine hesitancy, the disease itself, and other potential ways to respond (e.g., social distancing) was difficult to offset with government-supplied health messages. When misinformation was combined with the challenges regional and remote communities had to access appropriate personal protective equipment and vaccines, it is astonishing that greater mortalities were not experienced. (See for example, Gordon, 2022, “Palm Island reports six cases of COVID-19 with its vaccination rate yet to reach 50 per cent”).

4. **Socio-economic impacts** have not been foreseen or prepared for and this may well have repercussions for many years to come.

5. **Mental health and wellbeing** of community members and local government staff resulting from isolations and other actions undertaken during COVID-19 has not been considered and is potentially an ongoing issue for communities to negotiate over the long term.

6. **Lack of capacity** (including isolation facilities and management capacity, health expertise, and pre-existing social and health conditions in regional in remote locations) has continued to deliver challenges for local governments.

7. **Impacts (for example, economic) on local governments** have not been accounted for and are in fact hidden in the ongoing challenges of the COVID-19 responses.

8. **Lack of preparation and preparedness** in regional and remote communities is concerning and local governments are unable to cope with the additional strain of health-related activities that were never within their remit.

### 6.5 DATA SYNTHESIS

Synthesis of the data obtained by this project’s multiple research activities indicate:

1. A lack of local pandemic preparedness revealed by the lack of detail in local disaster management pandemic sub-plans. Due to this lack of current and accessible knowledge on pandemic management processes in regional and remote First Nations communities, decision-making is ad hoc and often based on perceptions and fears “on the run”. Review of LDMPs and sub-plans was reported to be required annually. These review processes require adequate resourcing in order for reviews to be up-to-date and for consideration be given to local capacity.

2. There needs to be much greater thought put into how to enact the biosecurity measures, what happens during and after restrictions are implemented, and how these measures will impact on communities (both directly and indirectly). Important considerations are the direct impacts on the restriction of movements into and out of communities and how First Nations Peoples can still access country during lockdown periods. The indirect consequences of these restrictions are the impacts on social and emotional wellbeing in the short- and long-term mentioned in more detail further below. Further consideration also needs to be given as to how to enable and empower regional and remote local governments to impose and manage those restrictions locally. Local decision-making needs to be considered when applying and understanding the restrictions of the biosecurity issues against cultural connections, cultural issues, cultural impacts, and access to country.

3. Local leaders noted that they felt they could/should play a greater role in the decision-making processes, but they were not being listened to, particularly within the rapidly changing health crisis of the pandemic. Leaders recognised that QH was the lead agency, but the chain-of-command was both not responding to local contexts and overriding local decisions/practices without real consultation. For example, one of the decisions local governments wanted was to have the power to extend biosecurity restrictions and times
because they felt it afforded them a level of protection that they needed. But negotiations were ongoing between federal and state level government departments and community voices were lost.

4. Usual disaster management arrangements have been put in place with QH being designated as the lead agency in the event of a pandemic. A state agency as the lead would seem an inversion of the existing disaster management arrangements where state and district groups have a focus on directing their efforts to supporting local efforts of LDMGs placed at the top of the DM arrangement pyramid. There appears to be insufficient knowledge or understanding on the overlaps and complexities of the relatively novel nexus between disaster management and pandemic disaster management, and the multiple layers of risk in and response. Better collaboration is needed between health services and LDMGs with more explicit and detailed definition of roles and responsibilities of each provided in guiding documentation, to avoid unrealised expectations and enable more effective planning and response. Improved understanding of this nexus, coupled with recent learnings regarding policy and legislative responses, may contribute to more timely and clearer communications between state, regional and local levels to inform local pandemic responses.

5. The impost on already over-stretched and under-resourced remote local governments has included enormous efforts made to combat misinformation regarding vaccinations and level of community risk from the pandemic, circulated mainly by social media. There have been further imposts on staff time in dealing with a flood of enquiries from people regarding ability to travel to community during the time of travel restrictions, extra cleaning of public sites and assisting with the provision of support services for those in local isolation in their homes. Early identification of isolation strategies is vital to ensure provision of appropriate isolation facilities and adequately resourced support services in communities, to avoid unnecessary strain on struggling local governments. Other impacts identified included delays in timely completion of capital works, hampered by rising costs of materials and difficulties in sourcing outside contractors. Yet to be fully assessed, unanticipated pandemic-related costs incurred by local governments were reported to not be subject to reimbursement under current disaster recovery arrangements.

6. In line with findings from the pandemic health promotion literature review, stakeholder interviews identified that, to be effective, health promotion messaging should include Indigenous-specific television and local radio messaging. Misinformation regarding vaccination concerns and level of community risk was reported to be addressed through face-to-face opportunities for discussion with trusted health professionals at the community level. The importance of community members/leaders or trusted community insiders being the faces of health promotion messaging was identified to overcome existing mistrust of higher-level messaging. Based on interviews with community members, there were indications of common knowledge gaps. These included required responses at each stage of pandemic preparation and response, level of community and individual risk of COVID-19 infection, vaccination side effects/impacts, and signs and symptoms of COVID-19 and its long-term effects. Only one participating local government reported efforts to produce health information messaging in local languages.

7. With vaccination a vital component to ending the acute phase of current and future pandemics, confidence in rapidly analysed surveillance data is key to informing policy adjustments and prioritisation of local pandemic management strategies. There were concerns reported by local leaders regarding under-reporting of data on local vaccination rates. These concerns resulted in a commitment by state level health authorities to review data collection systems. The results of this commitment are unclear. Retrieval and presentation of accurate data needs to easily accessible at the local level.

8. In stakeholder interviews, poor mental wellbeing concerns were identified most-frequently as a COVID-19 related issue. Most-frequently reported were fear of COVID-19 and its impacts and the impact of restrictions on movements on access to country and other cultural activities. The former was identified as greatly contributing to social and emotional wellbeing. Reported suicides of two young men in communities outside of the research sites were thought to be associated with an inability to access their employment outside of
community. While these particular issues may be addressed by improved planning and local management of travel restrictions, other mental wellbeing concerns included fears of the potential for family violence in households in isolation. Already limited mental health services were reported to be provided by visiting agencies and further limited by travel restrictions and reduced staff capacity caused by the pandemic.

9. The stakeholder interviews component of this research was undertaken in a portion of Queensland only, thereby limiting application of findings to other remote sites. Furthermore, lengthy ethics application processes and limited timeframe of the research prevented the inclusion of the important voice of health, education and police service staff in interviews.

10. Disaster management has an extensive knowledge database in terms of the Australian Disaster Resilience Knowledge Hub within the Australian Government National Emergency Management Agency. However, there is a need for a specific subset of this hub to inform pandemic responses in First Nations populations, which is in turn informed by Indigenous knowledges, practices and contexts.

11. Because messaging was changing so rapidly within the fast-moving contexts of the global pandemic political responses, community and local government members were very concerned about the legitimacy and primacy of information they were receiving – often local governments felt ‘left out’ of the conversations and had no means to understand the policy implications let alone the impacts therein.

12. Community members themselves reported being uncertain of their roles in the pandemic before it had arrived (unlike their familiarity with the “normal” natural disaster responses for example) but were also left confused as to from whom to gather reliable information after the arrival of COVID-19 in communities.

6.6 RECOMMENDATIONS

The following recommendations have been developed. Note however, these recommendations are not presented as a ranked list, but are all considered equally important to First Nations regional and remote community futureproofing for pandemic and disaster management as evidenced through this study. As previously noted, some of these recommendations will also be pertinent to the broader Australian population.

**RECOMMENDATION 1: REVIEW OF LOCAL DISASTER MANAGEMENT PLANS AND PANDEMIC SUB-PLANS TO INCLUDE COMMUNITY VOICES AND ENGAGEMENT**

- The required annual reviews, undertaken by the relevant state agency, need to be up-to-date and ensure more detailed local, culturally and socially grounded responses to pandemic disasters. These review processes will require adequate resourcing dependent on local capacities and capabilities.
- There needs to be consideration of local community contexts and capacity (e.g., sufficient isolation facilities, and adequate health support services, etc.).
- All relevant stakeholders must be included in planning and drafting the disaster management plans and pandemic sub-plans.
- Given the complexity of legislative environment of disaster management planning, consideration be given to the development of more accessible guidance documents to assist with the development of LDMPs and the membership of LDMGs.

**RECOMMENDATION 2: REVIEW OF IMPLEMENTATION OF THE BIOSECURITY ACT 2015**

- The Biosecurity Act was revised in 2021 (AG, 2021). However, based on evidence arising from this study, significant review and revision of the associated directives regarding declared travel zones, (i.e., restrictions of visitors to designated remote communities) needs to be ongoing. This review and subsequent revisions should include direct consultation with First Nations leaders and community members as co-writers of policy/legislature that affects them; with special representation for regional and
remote communities, with regard to local management to provide better access to country, and acknowledgement of First Nation cultural and social considerations.

RECOMMENDATION 3: BETTER CO-OPERATION BETWEEN STATE GOVERNMENT HEALTH AND HOSPITAL SERVICES, ABORIGINAL COMMUNITY CONTROLLED HEALTH ORGANISATIONS (ACCHOs), LOCAL DISASTER MANAGEMENT GROUPS (LDMGs) AND LOCAL GOVERNMENT

- Currently, the health and disaster management nexus is not adequately described in state disaster management and health pandemic management documents. There needs to be a clear expression of roles and responsibilities at all levels but particularly at the local level, guided by more detailed whole-of-government planning documents. One example of this is the need for mutually supportive collaboration between state health, local government and ACCHOs in the development and timely distribution of community-level public health messaging.
- There is a need for strong place-based partnerships at the community level to improve operational expression of the nexus between health systems and disaster management systems.
- There needs to be clear evidence of inclusion of representation of all health services – including state- and community-controlled services – on the LDMGs when undertaking pandemic-related strategy development and planning.

RECOMMENDATION 4: ASSESSMENT OF THE FINANCIAL IMPACTS OF PANDEMIC RESPONSES ON REMOTE LOCAL GOVERNMENTS AND REVIEW OF THE CURRENT DISASTER COST-RECOVERY ARRANGEMENTS WITH A VIEW FOR PROVISION OF RECOVERY OF THE EXTRAORDINARY PANDEMIC-RELATED COSTS INCURRED.

- As pandemic-related costs incurred by remote local governments may not be immediately apparent, we recommend that an assessment of these costs be undertaken within the next two years and an ongoing costing activity be developed whereby councils can report moving averages of the costs they have borne, as different kinds of pandemic and post-pandemic impacts appear.
- Special consideration needs to be given to the financial constraints and resources of remote local governments with a view to facilitating disaster management cost-recovery for unforeseen pandemic-related costs incurred.

RECOMMENDATION 5: THAT RECOGNISED, EFFECTIVE HEALTH PROMOTION MESSAGING APPROACHES FOR FIRST NATIONS AUDIENCES ARE MORE WIDELY UTILISED IN ADVANCE OF THE ‘NEXT PANDEMIC’

- Utilisation of communications learnings gained from the current (and previous) pandemics and health crises be adopted and implemented – ensuring that significant, targeted engagement with appropriate First Nations community leaders and influencers is implemented to assure rapid and timely messaging targeting First Nations Peoples to prepare for future events.
- Improved collaboration between Indigenous public health units, ACCHOs, other health related non-government organisations, LDMGs and community members.
- Incorporation of face-to-face approaches in message delivery between community members and community leaders and trusted health professionals.
- Development of resources in local languages where English is not the primary language spoken.
- Focusing messaging on education for youth and community members concerning the spread of communicable diseases and access to vaccinations and equitable access to health services.

RECOMMENDATION 6: CONTINUOUS COLLECTION AND ONGOING REPORTING OF ACCURATE PANDEMIC DATA FROM HEALTH SURVEILLANCE SYSTEMS INCLUDING VACCINATION RATES AND COVID-19 (OR OTHER PANDEMIC) POSITIVE CASES
» With vaccination a vital component to ending the acute phase of current and future pandemics, confidence in rapidly analysed, accurate, ongoing surveillance data is key to informing policy adjustments. There were concerns among local leaders regarding the under-reporting of data on Indigenous vaccination rates.

» With a high risk of resurgence of COVID-19 (and/or emergence or other pandemic diseases) there is a need for improved and prioritised access to testing, with a rapid turnaround time for test results.

» Data retrieval and presentation need to be easily accessible at the local level.

**RECOMMENDATION 7: STRATEGIES BE DEVELOPED TO ENSURE ADEQUATE AND UNINTERRUPTED MENTAL HEALTH SERVICES BE MAINTAINED FOR REGIONAL AND REMOTE FIRST NATIONS COMMUNITIES DURING A PANDEMIC**

» This will require strategic planning through better collaboration between LDMGs and visiting services.

» Greater use of telehealth models of care where adequate telecommunications systems are available.

» Recommended social and emotional wellbeing models of care are more accessible through partnerships with ACCHOs and government in keeping with recommendations made in the report "A National COVID-19 Pandemic Issues Paper on Mental Health and Wellbeing for Aboriginal and Torres Strait Islander Peoples" (Dudgeon, Wright, et al., 2020).

**RECOMMENDATION 8: FURTHER RESEARCH INTO LOCAL DISASTER MANAGEMENT UNDERTAKEN IN REGIONAL AND REMOTE FIRST NATIONS COMMUNITIES AUSTRALIA-WIDE**

» The stakeholder interviews were undertaken in a portion of Queensland only and the desktop analysis of LDMPs and pandemic sub-plans was limited due to the capacity of researchers to access and review these plans. As per the original research proposal, further research needs to be undertaken more broadly to encompass the variety of disaster management and local community governance contexts Australia-wide and to examine the pandemic sub-plans that have been developed since the study was undertaken.

» The range of stakeholders should include representatives from health, education, and police services.

» Further research could also include researching best practice that has been used in other First Nations communities’ (e.g. New Zealand, Canada) pandemic responses.

**RECOMMENDATION 9: DEVELOPMENT OF A KNOWLEDGE DATABASE OF INDIGENOUS KNOWLEDGES & PRACTICES TO SUPPLEMENT AND SUPPORT SCIENTIFIC KNOWLEDGE AROUND PANDEMIC AND DISASTER PREVENTION, PREPAREDNESS, RESPONSE, AND RECOVERY**

» Practitioners and the community of disaster management professionals has accrued an extensive database of knowledge particularly for natural disasters in terms of the ‘Australian Disaster Resilience Knowledge Hub’ (see: https://knowledge.aidr.org.au/) within the Australian Government National Emergency Management Agency. However, there is a need for specific subsets of this hub to inform:

a) First Nations’ knowledges, practices and responses;

b) pandemic responses generally; and

c) pandemic responses in First Nations populations and contexts to better meet the needs of populations across Australia and globally.

### 7 DISSEMINATION STRATEGY

The aim of the research dissemination strategy is to facilitate research uptake by key decision-makers in relation to pandemic preparedness and response for regional and remote Australian First Nations Communities. As noted by (Morton Ninomiya et al., 2022), knowledge translation must be an essential component for any applied health research...
and particularly where this research is conducted in collaboration with First Nations Peoples. Knowledge translation\textsuperscript{13} processes should be an inherent activity in the dissemination of all research and the activities need to prioritise local Indigenous Peoples ways of sharing knowledges (Smylie et al., 2014). As part of the translation of research findings into evidence-based policies and practices, research dissemination refers to activities where research findings are delivered as tailored messages to targeted audiences/stakeholders or knowledge users (Brownson & Colditz, 2017). (For further information about knowledge translation and mobilisation, see: Canadian Institutes of Health Research at: https://cihr-irsc.gc.ca/e/29529.html).

As part of this research project’s knowledge translation activities, a research dissemination strategy was developed in order to deliver findings to key disaster management stakeholders to inform policy development and practice for pandemic preparation, response and recovery. The dissemination strategy designed for this project focused on identifying and engaging the target audiences and sharing the project findings through tailored reports (Gannaway et al., 2011). Figure 17 shows research dissemination outputs planned or completed at the time of this report.

\textit{Figure 17: Research dissemination components and outputs for the study and their status at the time of publication}

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<thead>
<tr>
<th>TOOLS</th>
<th>MESSAGES</th>
<th>STATUS</th>
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Full research report available on CQU website
In progress Submission of full draft to APPRISE/NHMRC – August 2023
Submission of full report to APPRISE/NHMRC – September 2023
In progress To be posted on CQU & link to OIE website/ACQUIRE repository – September 2023 |
| Brief (summary) report to stakeholders | National level | In progress
Aboriginal & Torres Strait Islander Advisory Group on COVID-19, Department of Health and Aged Care
Hon Linda Burney MP – Minister for Indigenous Australians
Department of Home Affairs, Emergency Management Australia
NIAA – National Indigenous Australians Agency |
| | State Level | In progress
Hon. Mark Ryan MP – Minister for Police and Corrective Services and Minister for Fire and Emergency Services
Hon. Mr Crawford – Minister for Aboriginal & Torres Strait Islander Partnerships
Hon. Mr Steven Miles – Deputy Premier, Minister for State Development, Infrastructure, Local Government and Planning
Queensland Aboriginal & Torres Strait Islander Health Services – The Chief Aboriginal and Torres Strait Islander Health Officer and Deputy Director-General
Local Government Association of Queensland |

\textsuperscript{13} For further information about knowledge translation and mobilisation see: Canadian Institutes of Health Research at: https://cihr-irsc.gc.ca/e/29529.html.
### District Level
- District Disaster Management Groups
- Hospital & Health Services
- ACCHOs – Aboriginal Community Controlled Health Organisations

### Local Level
- LGAs Queensland
- Site-specific summary reports to four communities as requested
- Community-level organisations where requested

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<tr>
<th>Forums</th>
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(The forum is a chance to hear from 30+ community and government experts on how to effectively advance the indigenous economy and build successful partnerships to grow Indigenous businesses into successful enterprises.) | | Attended May 2022 |
| Prof Miller: | Presentation to the Royal Australasian College of Physicians. May 2022 | | Presented May 2022 |

### Conference Presentations

### Scientific Publications
- Radel, K & Robertson, J: Impacts of the COVID-19 pandemic for rural and remote First Nations communities – Call for application of Indigenous knowledges and practices to pandemic preparedness and response.

Summary report disseminated to LGAs by LGAQ April 2023  
Provided February 2022

In progress
8 REFERENCES


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*First Nations communities' preparedness, concerns, and strategies for addressing COVID-19*

*Final Report – 2023*


June 29 - July 2, 2013, Munich, Germany.


James, A., Chamberlain, D., Azar, D., & Sewell, L. (2022). Talking about health: Community ambassadors as a health promotion strategy to increase breast and bowel cancer screening in regional Australia. *Health Promotion Journal of Australia, n/a(n/a).* https://doi.org/10.1002/hpja.635


https://https://doi.org/10.3316/informit.289662503616295

https://https://doi.org/10.3316/informit.289662503616295


Usher, K., Durkin, J., & Bhu...


9 APPENDICES

9.1 APPENDIX A: LOCAL GOVERNMENT AREA BOUNDARIES QUEENSLAND

### 9.2 APPENDIX B: QUALITATIVE CODING PIVOT TABLES FOR LITERATURE REVIEWS BASED ON PRIMARY CODES

Table 10: DMFNC pivot table of the raw counts of primary, secondary and tertiary qualitative coding using 73 primary codes as the thematic categories for further grouping to sort data from 105 total open codes

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NB: Grand totals do not represent numbers of articles as some articles have multiple codes applied in each round of coding.
Table 11: HPFNC pivot table of the raw counts of primary, secondary and tertiary qualitative coding using 35 primary codes as the thematic categories for further grouping to sort data from 105 total open codes

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NB: Grand totals may not represent numbers of articles as some articles have multiple codes applied in successive coding rounds.
9.3 APPENDIX C: FIRST NATIONS DISASTER MANAGEMENT PLANS FOR COVID-19 INTERVIEW GUIDE

INTERVIEW GUIDE

1. Do you know who is responsible for the COVID-19 preparedness/response in the community/communities?
2. What is your understanding of COVID-19 management plans in your community/communities?
3. What is your understanding of the strategies (best plans) in place in your community for managing COVID-19?
4. Does the community have its own policies (rules and regulations) on a COVID-19 response?
5. How is the community made aware of the COVID-19 preparedness/management plan?
6. What issues have occurred in the community/communities as a result of the COVID-19 pandemic?
7. Based on your past experiences, what have been the biggest challenges the community/communities faced in responding to, or as a consequence of, the COVID-19 pandemic?
8. Do you have any suggestions for addressing the socio-economic and cultural challenges of First Nations communities during the COVID pandemic?
9. Does the community use the COVID-19 health promotion material produced by local, state and federal authorities?
10. Does the material help the community to prepare for and respond to COVID-19?
11. Are local and traditional Indigenous knowledge practices applied when preparing for and responding to pandemics such as COVID-19?
12. Based on your experiences from past pandemic episodes, can you please give examples of how the community prepared and responded?
13. What would you recommend as the next steps to include First Nations knowledge into COVID-19 health promotion information and literature to improve pandemic preparedness and response? Locally? State-wide? Nationally?
14. Who should be involved in the next steps to include First Nations knowledge into health promotion information and literature?
15. Is there anything else you would like to say about COVID-19 health promotion information and literature in First Nations communities?
16. Who else do you think we should talk to?