A WHOLE-OF-COMMUNITY APPROACH TO COVID-19

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2 Introduction

COVID-19 will challenge our health and welfare systems in ways unprecedented in living memory. To meet this challenge, it is proposed that we develop a regional, strategic, co-ordinated, whole-of-community approach to COVID-19, leveraging off available regional assets.

This paper examines this possibility in the context of existing NSW state emergency management guidelines and structures.

3 Expected Severity

A presentation by NSW Health to hospital staff told them to expect between 4,000 and 12,000 deaths across the state during the 12 to 22 week "first wave" of COVID-19.[1] Other statistics presented included an expected 272,000 presentations of people seeking health advice, and the State ICU bed capacity being between 115% and 330% capacity for 10 weeks.

A Medical Journal of Australia article published on 30th March 2020 applied a UK-based model to the NSW population. The result was that "*…the peak demand for ICU beds was forecast to be 6,965 ICU beds with an intensive mitigation strategy (797% of the ICU capacity prior to COVID-19). The compartmental model estimated that under a strategy that reduced transmission by one third, at least 5,109 ICU beds would be required (584% of the prior ICU capacity)...The burden upon intensive care services…was forecast to be immense with both modelling approaches."*[2]

Given the above, it is not unreasonable to suggest that the clinical severity of the COVID-19 pandemic is likely to be "high", according to the classification used in the Australian Health Management Plan for Pandemic Influenza (2019).[3] Under these circumstances, we can expect:

- Widespread severe illness will cause concern and challenge the capacity of the health sector.
- Areas such as primary care, acute care, pharmacies, nurse practitioners and aged care facilities will be stretched to capacity to support essential care requirements.

[1] https://www.theguardian.com/world/2020/mar/12/hospital-staff-in-nsw-told-to-prepare-for-8000-coronavirus-deaths
[2] https://www.mja.com.au/journal/2020/212/10/modelling-impact-covid-19-upon-intensive-care-services-new-south-wales
[3] https://www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-ahmppi.htm

- Heavy prioritisation will be essential within hospitals to maintain essential services and mortuary services will be under pressure.
- The demand for specialist equipment and personnel is likely to challenge capacity.
- Pressure on health services will be more intense, rise more quickly and peak earlier as the transmissibility of the disease increases.
- Healthcare staff may themselves be ill or have to care for ill family members, further exacerbating pressures on healthcare providers.
- Secondary care services, such as blood services and diagnostic services will be challenged to maintain capacities and the community focus will be on maintaining essential services.

4 Siloed Planning, Siloed Preparation, and Siloed Responses

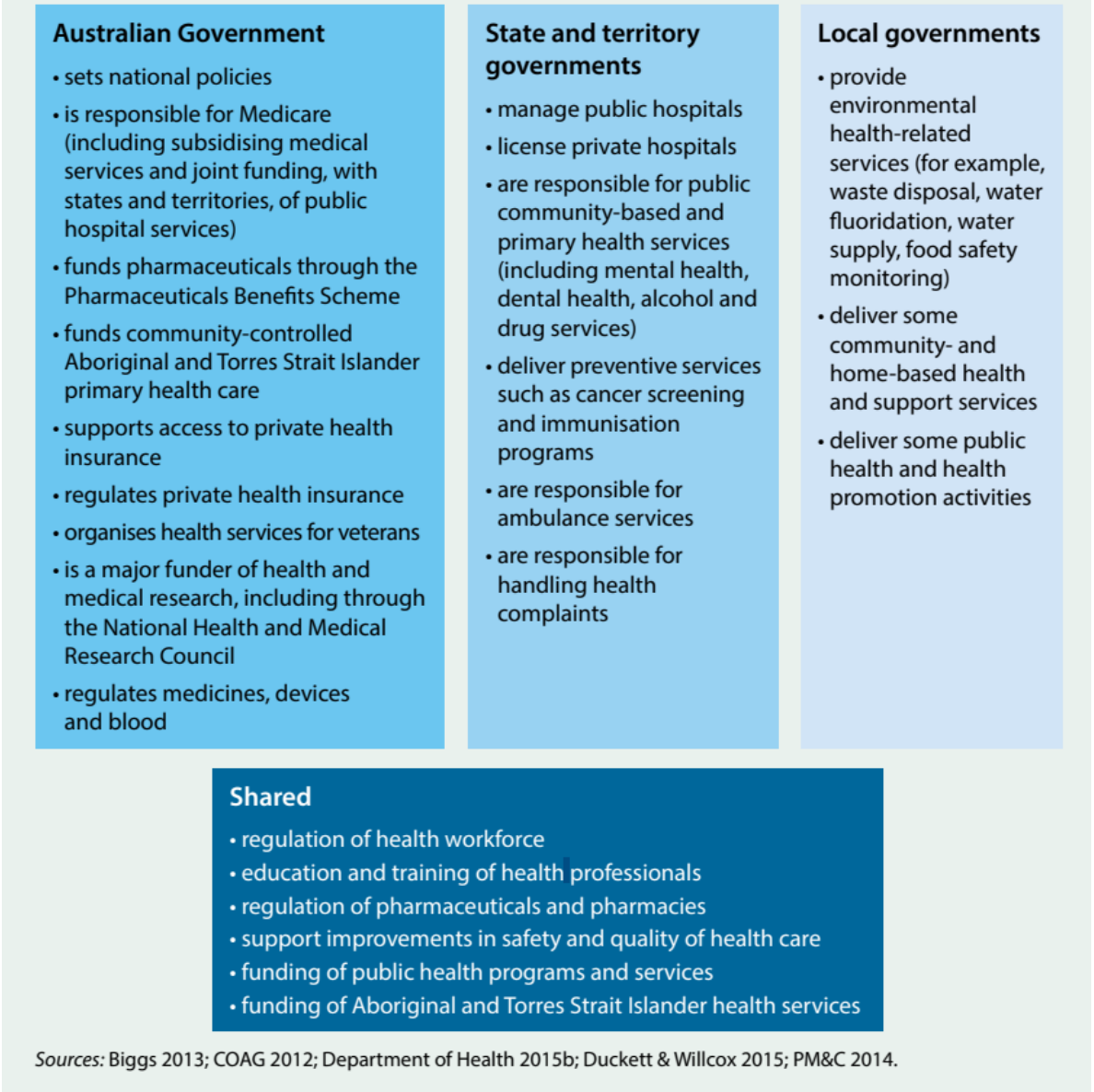
In early 2019, a report titled "Australian health services: too complex to navigate"[4] noted:

"*Medicare is regarded as the backbone of Australia's health care and accessibility… The scheme however, was superimposed on an existing set of health care services provided by the states, not-for-profit and private providers and private insurance policies held by about half the population. Over the last 45 years, there have been many amendments, workarounds, superimposed fixes and band aids applied to our health system from multiple sources with competing agendas… The result is less an Australian health system than a complex set of services, with multiple providers and multiple payers generating complexity for both patients and providers alike… Successive reviews found that current funding arrangements create – or fail to address – barriers to coordinated, clinically effective and efficient health care."*

The divisions between our healthcare systems are illustrated in the following diagram:

[4] https://www.vu.edu.au/sites/default/files/australian-health-services-too-complex-to-navigate.pdf

Figure 2.1.1: Main roles of government in Australia's health system



Sources: Biggs 2013; COAG 2012; Department of Health 2015b; Duckett & Willcox 2015; PM&C 2014.

From https://www.aihw.gov.au/getmedia/f2ae1191-bbf2-47b6-a9d4-1b2ca65553a1/ah16-2-1-how-does-australias-health-system-work.pdf.aspx

As healthcare has been divided along into government and funding silos, so has health care planning. This is evident in the NSW State emergency planning documents, being:

- NSW State Emergency Plan (EMPLAN)[5]
- NSW Human Influenza Pandemic (sub) Plan[6]
- Health Services (HEALTHPLAN)[7]
- Regional Emergency Management plans (formerly known as District plans)

[5] https://www.emergency.nsw.gov.au/Pages/publications/plans/EMPLAN.aspx
[6] https://www.emergency.nsw.gov.au/Pages/publications/plans/sub-plans/human-influenza-pandemic-plan.aspx
[7] https://www.emergency.nsw.gov.au/Pages/publications/plans/supporting-plans/health-services-healthplan-supporting-plan.aspx

- Local Emergency Management Plans

These plans are built on principles such as:

- Coordination and information sharing - a commitment to an all-hazards, all-agencies approach which includes maximum coordination and information sharing across the full spectrum of prevention, preparation, response and recovery
- An all agencies approach – recognising that no one agency can address all of the impacts of a particular hazard, either in a proactive or reactive sense, making it necessary for a lead agency to coordinate the activities of the large number of organisations and agencies involved (including all levels of government, non-government and private sectors).
- Community and Stakeholder Engagement: Community and stakeholder engagement is a critical aspect of emergency management across the full spectrum of prevention, preparation, response and recovery. Agencies will engage with the community and stakeholders, seek their input into the development of plans, especially at the local level, and involve communities and stakeholders where appropriate in exercising these plans.
- Disaster Resilience: Disaster resilience is an outcome derived from a sharing of responsibility between all levels of government, business, the non-government sector and the community who then act on this basis prior to, during and after a disaster.

The AHMPPI also states in the preparedness phase for Primary health care providers:

- The Australian Government role is to: "*Ensure involvement in planning and design of systems to respond to an influenza pandemic. Ensure inclusion of/coordination with S/T HD [State/Territory Health Departments] when working with primary healthcare providers on pandemic issues*."
- The State and Territory Government role is to: "*Ensure involvement in planning and design of systems to respond to an influenza pandemic. Ensure inclusion of/coordination with Health when working with primary healthcare providers on pandemic issues.*"

Despite these statements, on reviewing the emergency plans, it is evident that the major focus of State Health is on the hospital-based response to COVID-19, including:

- Increased demand on the Emergency Departments
- Increased demand on admission
- Increased demand on intensive care beds

With the exception of residential aged care, there is almost no mention of primary or community care, despite these sectors providing the vast majority of health care in our communities.

This siloed approach to emergency planning, preparation and response was particularly evident during the Australian bushfires of 2019-2020, where there were multiple reports of general practitioners being limited or excluded from rendering help:

- "*I [Dr Kate Manderson, GP]notified the EOC (emergency operation centre) that I was there and willing to help … and the EOC team called me back and said, 'Well, no. You're not part of our protocols and you're not part of our team, so we can't use you'… The local health district and the ambulance services were just not really interested in helping us out*"
- "*A doctor in Merimbula — who has chosen to remain anonymous — also expressed frustration at the co-ordination of local help. She said she went to an evacuation centre but was told she could only give basic first aid, and an ambulance had to be called for anything*

else. She said ambulances took an hour to arrive and the St John's Ambulance team that had been helping was evacuated from her area. "I don't understand why there would not be better co-ordination of care," she said. "If not for the dedication of our lovely group of local GPs … these people were abandoned with not even any access to basic first aid."[8]

The peak body for GPs, the Royal Australian College of General Practitioners (RACGP), also notes the lack of integration between State health services and GPs:

- *"Right now emergency planning is the preserve of state and territory governments and general practice is covered at the federal level. So the RACGP will work with state emergency management structures to bridge this gap and bring GPs into the fold… We want GPs to be heavily involved in emergency planning and response at state and federal levels and we would welcome further discussion with the Department of Health…"*[9]

The lessons learnt and a way forward was published by the Medical Journal of Australia in January 2020:

- *"In examining the literature one could be forgiven for concluding that GPs were not involved [in disaster responses]. However, they are intimately involved as trusted local community health professionals often stepping up to a self-defined role to aid their community during its worst adversity. GPs have consistently shown strength and courage in these events, sometimes suffering personal consequences as a result."*
- *"[A priority is to urgently] integrat[e] GPs into disaster systems. This requires embedding them in local, state and federal disaster plans and policies, including GPs or representatives in planning meetings and exercises through the PHNs, and in clearly defining their roles in all phases of disaster management. This also requires funding for establishment and sustainment of the GP capability."*[10]

Unfortunately, there has been little opportunity for this embedding to occur - even as the MJA article was being published, COVID-19 had already overwhelmed the health care system in Wuhan, China.

Siloed emergency preparation, planning and response may be suboptimal, but have little major consequence in a discrete emergency, where there is a single episode that is relatively self-contained. But as noted in the NSW Human Influenza Pandemic (sub)plan,[11] pandemics poses additional challenges to the 'traditional' emergency due to their "unpredictable nature, wide-ranging impacts and prolonged duration". This is especially the case when the severity of the pandemic is high.

[8] https://www.abc.net.au/news/2020-01-07/bushfire-emergency-sees-local-doctors-call-for-addition-to-plan/11843974

[9] https://www.hospitalhealth.com.au/content/clinical-services/article/racgp-urges-support-for-gps-at-bushfire-frontline-1337599797#axzz6HcNlsOEr

[10] https://insightplus.mja.com.au/2020/3/building-gp-capacity-in-times-of-disaster/

[11] https://www.emergency.nsw.gov.au/Pages/publications/plans/sub-plans/human-influenza-pandemic-plan.aspx

When all aspects of the health care system are likely to come under severe strain, with elements being overwhelmed, siloed health care will result in more than just a handful of exasperated General Practitioners.

5 The Cascade of Failing Care

Most deaths from COVID-19 are expected to be from the inability of seriously ill patients to access overwhelmed hospital services, including ICU beds.[12]

Community care involves more than General practitioners. There are a multitude of health and welfare services in the community keeping people well and out of hospital[13] by treating and managing acute illness and long-term conditions, and supporting people to live independently in their own homes.[14]

When any component of a community service can no longer meet the care needs of a client, there is an inevitable flow-on effect on another component of the healthcare system. Another component or components must be engaged to meet the higher care needs of the patient.

For example, if an elderly person at home only needs assistance once or twice a day with medication management, this may be sufficient to keep them otherwise independent in their own home for several years.

Under normal circumstances, the effects of ageing would lead to increasing care needs for this elderly person, necessitating the increase of services required to continue care at home. This could include shopping services, meal preparation/"Meals on Wheels", laundry and cleaning services, and assistance with showering.

Once care needs exceed even these services, typically a patient would progress to a residential aged care service.

Under current circumstances, however, the risk is that this gradual cascade of care needs is accelerated rapidly and *en masse*. It is likely that normal community services will be disrupted acutely and unpredictably by service failure (e.g. service provider suffering loss of staff from resignations, home isolation, illness, or death;[15] or the patient being symptomatic with COVID-19 and the service provider being unable to provide services due to a lack of PPE[16].) The failure to supervise medication, provide shopping services/meals or nursing support would then result in a decline in the health of the patient, leading to patient care needs cascading rapidly to General Practice or tertiary levels.

Another example of a potential cascade of failing care is with dental care. On the 26th of March 2020, the Australian Health Protection Principal Committee, which advises the National Cabinet on

[12] https://www.mja.com.au/journal/2020/212/10/modelling-impact-covid-19-upon-intensive-care-services-new-south-wales
[13] https://www.health.gov.au/initiatives-and-programs/keeping-australians-out-of-hospital-initiative
[14] https://www.kingsfund.org.uk/publications/community-health-services-explained
[15] https://jamanetwork.com/journals/jama/fullarticle/2763136
[16] https://www.abc.net.au/news/2020-03-20/disability-sector-particularly-at-risk-of-coronavirus-impact/12068090

the COVID-19 response, has advised that dentists move to level 3 restrictions as per the Australian Dental Association guidance.[17] This severely limits the procedures that dentists are able to perform to treatments that do not general aerosols – which encompasses almost every dental procedure involving a high-speed handpiece.

A personal communication from a concerned dentist noted that many dental practices in a regional centre were now closed, as they were unable to generate enough income to be financially viable. The concern of the dentist was that restricted access to dental care will lead to an increasing cascade of patients with acute dental presentations presenting to general practice and/or emergency departments, both in-hours and after-hours.

In other words - failure of normal community services to non-COVID-19 clients has the potential to compound the direct COVID-19 related pressures that will already be stressing the hospital system.

The Australian Health Management Plan for Pandemic Influenza (AHMPPI)[18] frames it in this way: "*If surveillance indicates **widespread community transmission** is …occurring in Australia… The pattern of demand may become such that existing arrangements can no longer cater for it. Reallocation and reprioritization of resources may be required. Staff absenteeism, due to either illness or the need to care for those who are ill, will impact on human resources. Increased absenteeism across the community is likely to cause increasing disruption to services and will need to be taken into account within health system planning (and across broader community planning). Some level of enhanced data collection will need to continue in order to fully understand the behaviour of the disease and to monitor for changes*."

Our current pandemic planning, preparation and responses lack clear processes for both identifying predictable and emerging risks such as the above, as well as coordinating mitigating actions in a whole-of-community approach.

6 Riding the COVID-19 Bullet Train

The pace at which COVID-19 has swept across the globe has left everybody scrambling to catch up. We are already in the Response (Action) AHMPPI Stage.

In Australia we have seen never-before seen changes to both our society and to the delivery of medical care that are staggering both in terms of their breadth, depth and rapidness of implementation.

The level of preparedness which we previously considered adequate is now found to be lacking. GPs have a RACGP document[19] as a guide to pandemic planning and response. But, being unable to predict the policy changes that have since occurred, it could not and does not detail how to efficiently transmit a prescription from a telephone consultation conducted from home-isolation to a patient at a remote location. It suggests that "*Practices are advised to consider how the practice will continue operating with a reduction in key staff, especially in the event of a pandemic… Practices may also wish to contact other practices nearby to ascertain if they have capacity to provide some*

[17] level 3 restrictions as per the Australian Dental Association guidance
[18] https://www1.health.gov.au/internet/main/publishing.nsf/Content/ohp-ahmppi.htm
[19] https://www.racgp.org.au/download/Documents/Disaster/mepsguide.pdf

staff for a short period of time. Practices in close proximity may wish to consider pooling staff and resources in an emergency…" – but there is no detail about how this would actually happen, especially given GP Medicare provider numbers are tied to a specific location.

If this is the case with General Practice, which "*is the cornerstone of successful primary health care, which underpins population health outcomes…*"[20] it is hardly surprising that a similar situation now faces most (if not all) other community health and welfare providers.

In addition, whilst the State Emergency Planning documents recommend an Emergency Risk Management approach to pandemics, it is not clear that anybody taken such an approach with General Practice, let alone other community health care and welfare services.

To consider how best to approach the situation, in the context of the train having already left the station, the next sections review the "tracks" the train should be running on - the objectives and principles of emergency management, and the existing state emergency management structure.

7 Objectives and Principles of Emergency Planning and Management[21]

7.1 The objectives of emergency management

- provide clarity as to command and control, roles and coordination of functions in emergency management across all levels
- emphasise risk management across the full spectrum of prevention, preparation, response and recovery (PPRR)
    - Prevention: to eliminate or reduce the level of the risk or severity of emergencies
    - Preparation: to enhance capacity of agencies and communities to cope with the consequences of emergencies
    - Response: to ensure the immediate consequences of emergencies to communities are minimised
    - Recovery: measures which support individuals and communities affected by emergencies in the reconstruction of physical infrastructure and restoration of physical, emotional, environmental and economic well-being.
- emphasise community engagement in the development and exercise of plans as well as in their operational employment
- ensure that the capability and resourcing requirements of these responsibilities are understood.

7.2 The principles of emergency management

- Coordination and information sharing - a commitment to an all-hazards, all-agencies approach which includes maximum coordination and information sharing across the full spectrum of prevention, preparation, response and recovery, with the Lead agencies identifying and involving partner agencies at the earlier opportunity.

[20] https://ama.com.au/position-statement/general-practice-primary-health-care-2016
[21] NSW EMPLAN

- All agencies approach – recognises that no one agency can address all of the impacts of a particular hazard, either in a proactive or reactive sense, making it necessary for a lead agency to coordinate the activities of the large number of organisations and agencies involved (including all levels of government, non-government and private sectors).
- Risk management - to support agencies and stakeholders determining their roles and to allocate resources, the comprehensive approach is informed by risk management principles
    - This is a process which involves dealing with risks to the community arising from hazards. It is a systematic method for identifying, analysing, evaluating and treating emergency risks. Risk treatments include the reduction in frequency or consequence through prevention and mitigation measures, and preparation, as well as provision for response and recovery should an emergency event occur.
- Local capability - Responsibility for preparation and risk management rests at the local level in the first instance. Emergency response and recovery are conducted at the lowest level of effective coordination. Resources and support are augmented by Region and State level coordination as required.
- Community and Stakeholder Engagement: Community and stakeholder engagement is a critical aspect of emergency management across the full spectrum of prevention, preparation, response and recovery. Agencies will engage with the community and stakeholders, seek their input into the development of plans, especially at the local level, and involve communities and stakeholders where appropriate in exercising these plans. This will improve community understanding of these arrangements and promote disaster resilience.
    - Disaster Resilience: Disaster resilience is an outcome derived from a sharing of responsibility between all levels of government, business, the non-government sector and the community who then act on this basis prior to, during and after a disaster. Disaster resilience is significantly increased by active planning and preparation. A shared understanding of the disaster risks at community level is a vital precursor.
        - Agencies operating under EMPLAN promote disaster resilience by helping to understand and share risk information, by engaging communities in the development of plans to reduce exposure to hazards through mitigation, and via a risk management approach allows the emergency management arrangements to target their efforts at the places, times and populations most vulnerable to a disaster in their exercise.
        - In other words - the benefits of resilience are that agency resources are focussed on those most in need or at threat, and conversely that disaster planning and actions during a disaster is more effective because the community, who is in many ways best placed and best informed, is actively engaged in securing itself.
        - The nexus between community and government to achieve resilience will vary, but should as much as possible be via the existing channels that work for each community.

8 State Emergency Management Structure

8.1 NSW Emergency Operations

The combat agency for human infectious disease emergencies is NSW Health. At the direction of the Minister, the designated State Emergency Operations Controller (SEOCON) is the NSW Police Commissioner.[22]

In support of the SEOCON, the NSW Government has established the State Emergency Operations Centre (SEOC), at the Rural Fire Services headquarters in Homebush. Comprising of experts from more than 20 critical agencies such as Police, Education and Transport,[23] the SEOC controls and plans for emergency operations, stores and disseminates information, acquires and allocates resources, and provides public information.

A tiered structure for policy and planning, as well as operations, is defined, with management conducted at the lowest effective level. Under the State EOCON are Regional and Local EOCONs, supported by relevant Emergency Operations Centres (EOCs), each of which have their own Region Emergency Management Committees (REMCs) and Local Emergency Management Committees (LEMCs) respectively. Each EOC gives all supporting agencies a clear and consistent intelligence picture to support their own planning; as well as facilitating logistic support if necessary.

"Functional areas" represent key sectors and provide support to the relevant Combat Agency. They conduct planning and preparation on their own initiative in addition to providing support during operations.

In this instance, NSW Health is both the Combat Agency and the Functional Area for human infectious diseases.

The Welfare Service Functional Area is the responsibility of the Office of Emergency Management, Department of Justice. The responsible Minister is the Minister for Emergency Services. This functional area is responsible for coordinating the provision of welfare services to disaster affected people. Welfare services are those provided to assist in the relief of personal hardship and distress to individuals, families and communities by meeting the immediate needs of disaster affected people. These services may include food, clothing and shelter.

The State Emergency and Rescue Management Act 1989 (SERM Act) provides the general legal framework and governance for emergency management in New South Wales. Other relevant Acts include the Public Health Act 2010 and the State Emergency Service Act 1989.

At a State Level, the Premier establishes Cabinet Standing Committees with responsibility for overseeing and developing NSW capabilities with regard to emergency management.

Development of emergency management policy, overseeing of emergency management and advising the Minister, is by the State Emergency Management Committee (SEMC), which is the peak committee of officials. The roles and functions of the SEMC are translated as appropriate at

[22] https://www.smh.com.au/national/nsw/mick-fuller-the-man-managing-the-movement-of-7-5-million-people-for-90-days-20200402-p54gm2.html
[23] https://justiceconnect.org.au/resources/how-the-new-south-wales-governments-emergency-restrictions-on-covid-19-work/

Regional level through Region Emergency Management Committees (REMC) and at Local level through Local Emergency Management Committees (LEMC), where local level is based on Local Government Areas.

8.2 South Australia & Western Australia Emergency Operations

The Adelaide COVID-19 Command Centre is a multi-agency centre that was launched on 20/3/19. It is led by the chief of the fire department, in the context of them treating COVID-19 as a "mass-casualty" event.[24] The services they have on-site include representative from state health, the PHNs, ambulance, police, fire, and SES. They can and have been responding rapidly and cohesively to challenges that require a co-ordinated response from general practice, tertiary and essential services.

In Western Australia, WA Health is also opening COVID-19 command centres[25] - *"This [where] we are both co-ordinating [and] commanding a state of emergency…This is about our community. This is about us being able to make decisions ... and there are many issues that will impact on people's lives, people's businesses and indeed the way we operate as a community…" The incident command centre will involve a number of different agencies including not-for-profits, volunteer-run organisations and government authorities. Mr Dawson said the ultimate goal was to ensure vital community services were available and to maintain law and order throughout the COVID-19 pandemic."*

- Primary remit[26]
  - ensure essential services (health, police, power, water) and vital community services remain available
  - maintain law and order
- Leadership
  - WA Police Force
- Intelligence gathering
  - Track workforce impacts on essential services (including police, health, power, water), including personnel needing quarantine/isolation, becoming unwell, or refusing to come to work
  - Possible use of tracking technology to monitor those directed to self-quarantine
- Planning
  - Anticipate need for essential services across WA
- Responses
  - Implement directions from state emergency committee meetings
  - In response to demands, co-ordinate public service, private sector/NGOs and voluntary workers
    - Amplified & sustained version of a bushfire or cyclone response
    - Example given of ensuring a homeless person still has access to shelter/food

[24] Personal communication, Robin Moore (PHN liaison, South Australian COVID-19 Command Centre)
[25] https://www.watoday.com.au/national/western-australia/wa-police-commandeer-optus-stadium-as-emergency-headquarters-20200324-p54dgn.html
[26] https://www.abc.net.au/news/2020-03-28/inside-wa-coronavirus-command-centre-at-perth-stadium/12096532

- "It is a state of emergency so we will have to break glass if we have to, to ensure that the whole community is cared for."

Australian Defence Forces Reservists being contacted to assist with staffing field hospitals, securing supply chains and enforcing public law and order, particularly in hospitals

The WA emergency management structure is similar, but not identical, to the NSW structure:[27]

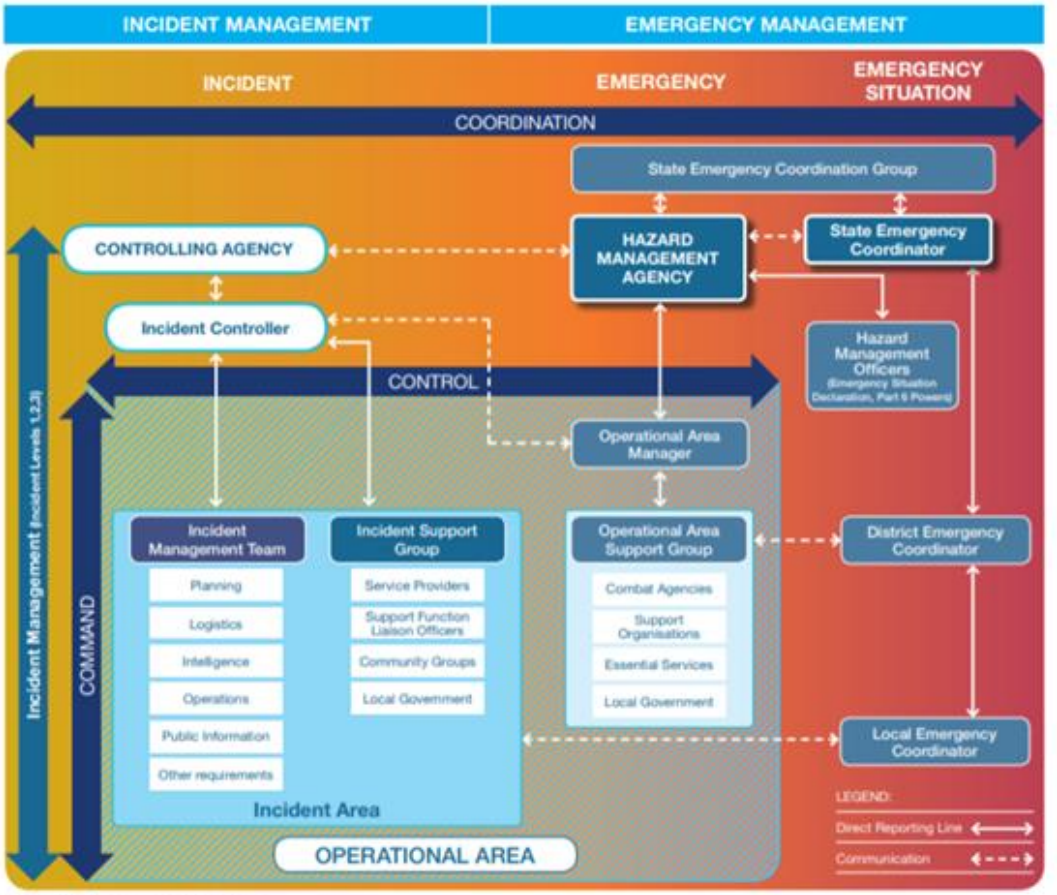


Figure 8: Emergency Situation

9 Regional Coordination

There four main structures where whole-of-community regional-level coordination could reside:

1. Regional Emergency Operations Centres
2. Local Health Districts
3. Regional General Practice Associations
4. Primary Health Networks

[27] Personal communication, John Heslop (Coordinator, Patient Flow Command Centre/Acting Director Disaster Management/Acting Director Office of the Chief Health Officer, Department of Health, Western Australia)

9.1 Regional Emergency Operations Centre

The Purposes of a Regional Emergency Operations[28] Centre (REOC) include:

- Identifying prevention and mitigation strategies;
- Providing support to Local level emergencies;
- Controlling emergency operations at District level where control cannot be effected at the Local level;
- Coordinating District level support to combat agencies;
- Controlling emergency operations where the emergency extends across more than one local government area; and
- Providing assistance to other Districts either on a pre planned basis or as directed by the SEOCON.

The Activation triggers for a Regional Emergency Operations Centre[29] include:

- Support
    - Where it is necessary to coordinate two or more local level operations which are controlled by Emergency Operations Controllers;
- Control
    - When an emergency grows beyond the capability of a Local Emergency Operations Centre (LEOC);
    - When the emergency crosses two or more local emergency management boundaries and the change in control level may improve the situation;
    - When significant Political, Environmental, Social, Technological, Infrastructure or Economic impacts are foreseen;
    - When directed by the SEOCON

The purposes of a REOC appear ideally suited for coordinating a whole-of-community approach to COVID-19, and the criteria for activation (e.g. community aged care providers would cross two or more LEOC/LGA boundaries) appear to have been met.

However:

- In COVID-19, the Combat Agency/NSW Health remains the Regional Controller, not the REOCON
- Even in a support role to the Combat Agency/NSW Health, the REOCON and executive support to the REOCON is provided by the NSW Police Force. The NSW Police Force is already being stretched beyond usual capacity with enforcement of NSW Public Health orders, and is not in a position to provide whole-of-community coordination.[30]

[28] Hunter Central Coast Emergency Management District Disaster Plan (DISPLAN), 2007
[29] Sydney Metropolitan Regional Emergency Management Plan, November 2017
[30] Personal communication, Regional Emergency Management Officer, Hunter Central Coast Regional Emergency Operations Centre

9.2 Local Health Districts

The NSW Health Services (HEALTHPLAN) Supporting Plan[31] is intended to "*coordinate all of the health service resources available to the State HSFAC for the prevention, preparation, response and recovery from the impact and effects of a health emergency, or an emergency where a State response is coordinated"*. It notes that:

- "*NSW Health may request the provision of support and resources from the following organisations. Resource commitment agreements are to be negotiated at the [Local Health District] LHD level [see Annex 7]. a) Residential Aged Care Services b) Private Health Facilities c) Local Governments f) Medicare Locals [predecessors of the Primary Health Networks)*".[32]

At a regional level, the major focus of the Local Health Districts is on:

- Public health unit activity
    - Diagnosis
    - contact-tracing
    - GP education
    - public messaging
- Planning
    - Anticipated reduction in staff
    - Planning for Residential Aged Care safety and other Institutional settings
    - Emergency Departments demand
    - Admission demand
    - intensive care beds

As with NSW Police, LHD is attempting to manage increased COVID-19 related activities, as well as normal services. Current resourcing is already stretched, and, particularly in the face of significant budget concerns[33], securing additional resourcing to fund a whole-of-community coordination approach is not likely.

9.3 Regional General Practice Organisations

When the Divisions of General Practice transitioned to Medicare Locals in 2011, some Divisions remained operational as independent GP organisations. An example of this is the New England Division of General Practice.[34]

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[31] https://www.emergency.nsw.gov.au/Pages/publications/plans/supporting-plans/health-services-healthplan-supporting-plan.aspx

[32] Medicare Locals were superseded by Primary Health Networks in 2015

[33] *"…senior [NSW Health] beureaucrats are considering several means of 'dramatic change required to close the gap' and reduce the department's spending by 20 per cent in the next 10 years."* - https://www.smh.com.au/politics/nsw/leaked-document-shows-nsw-health-needs-1b-in-job-cuts-to-plug-funding-gap-20191209-p53i9o.html

[34] http://www.nedgp.org.au/about/

Some regions have established local general practice associations, examples being the Mt Druitt Medical Practitioners Association, and the Hunter GP Association.[35]

Whilst having the potential to be valuable conduits for information both to and from General Practice, these organisations are largely run by volunteer GPs without significant executive or administrative support.

They are likely to have some capacity to be part of coordination efforts, but unlikely to have the resourcing to administer it.

9.4 Primary Health Networks

PHN roles described in the AHMPPI include:

- Work with States and Territory Governments to:
    - identify service gaps and vulnerable populations; and
    - to support dissemination of communications and engagement in strategies.
    - Establish clear communication lines with health care providers both at state and local levels (such as pharmacists, community nurses, ambulance, hosp, mental healthcare workers, RACFs.)
- Support data collection and identification of gaps in services and vulnerabilities in patient populations relevant for their region
- Support health practitioners as spokespeople by ensuring communication of relevant information
- Provide GPs with information and seek their input
- Support health practitioners (including resource coordination) with dedicated staff and call line
- Liaise with local hospitals/Eds re: demand, access and expectations
- Support distribution and use of stockpile items (particularly antivirals)

This is an extensive list. Functionally, it is likely that many PHNs will be fully engaged with:

- Maintaining normal services
- Dealing with COVID-19 related concerns from commissioned services
- Distributing facemasks to GPs and pharmacists from the national stockpile
- Considering locations for local community based respiratory clinics and assisting with applications

9.5 Regional Community Alliances

From the website of the Sydney Alliance:[36]

"The Sydney Alliance is a diverse coalition of community organisations, religious organisations, unions and schools that uses the tools of community organising to make the city a better place to

[35] www.huntergpa.org.au
[36] https://www.sydneyalliance.org.au/about_us

live. The idea of building a Sydney Alliance was first raised in May 2007, and by November that same year was financially supported by 13 organisations. The Alliance launched with 45 partner organisations on 15 September 2011. The Alliance has three goals.

We work with our partner organisations to:

- *Increase and strengthen the leadership capacity of their members, their leaders, and staff.*
- *Deepen the relationships across civil society by strengthening the relationships between our partner organisations.*
- *Act for the 'Common Good'."*

The Sydney Alliance is now a coalition of "*hundreds of organisations across NSW*". On March 24th, 2020, they had a "COVID-19 Response" meeting, involving "*…70 leaders representing the state's largest religious and community organisations, social service groups and unions*" resulting in the following advocacy goals:

- Home guarantee – stop all evictions during the health crisis, not just evictions for rental arrears, across social housing/boarders & lodgers; deter unlawful threats of evictions; implement health & safety measures for renters in shared accommodation; consider prevention of unmanageable debt crisis caused by rent arrears
- Energy guarantee – companies to continue services without interruption, including energy telecoms, banking & insurance; pause debt collection & legal/bankruptcy proceedings; waive penalty a& late fees, including additional interest chards
- Work guarantee – leave and financial support for all works, including 1.4 million visa works and thousands of undocumented works with no access to any social safety net
- Replacing the term "*social distancing" with "physical distancing*"
- Commit to build a local backbone of community connection throughout Sydney's neighbourhoods by connecting existing organisations together.

An offshoot Hunter Community Alliance has commenced in the Hunter region,[37] with the first round of COVID-19 round table discussion held in the week ending 19th April 2020.

Is there a single place where COVID-19 whole-of-community regional coordination can reside? This will vary according to region, depending on local capacity, resources and relationships. It may be that a region may be able and willing to co-ordinate a whole-of-community response centre at the Regional Emergency Operations Centre, the local PHN, or the relevant Local Health District. Alternatively, it may be that elements may be split, either formally or informally, between several organisations, utilising the principles of "alliancing".[38] Where a formal local community alliance already exists, this may be the most natural place to coordinate a whole-of-community regional approach to COVID-19.

10 Risk Assessments - A comprehensive, all hazards approach

[37] https://www.sydneyalliance.org.au/hunter_community_alliance

[38] https://www.healthpathwayscommunity.org/News/Latest-Community-News/ArticleID/559/Canterbury-Health-System-making-its-mark-on-the-world

The following is from a local engineer with extensive experience in risk assessment and management:

- "*The only way to effectively address what is knocking down your front door is to have a dedicated, appropriately skilled COVID-19 project team handle the incoming impact. Then, assess each risk, assign control measures to those risks in conjunction with the existing regional operations and respond accordingly.*

  My thesis for running the response under a risk assessment framework stems from nearly 40 years of executing large infrastructure projects to various industries both here and abroad. In the face of competing demands on our health system, COVID-19 still needs to be treated like a project. It has a beginning and it will have an end, the extent to which the outcome is positive or negative depends entirely on how the various risks are managed during the virus' project lifecycle.

  The risk process, specifically the risk session and the risk matrix derived from that session has the following objectives:
    - *To assess all reasonably foreseeable risks associated with the virus' impact on the regional health system.*
    - *Assess those risks and rank them according to their likely impact on the system.*
    - *Provide mitigation control measures that address each risk in order to manage that risk to the extent that is reasonably possible.*

  The benefits of the risk management process include:
    - *A confident basis for decision making and planning*
    - *Effective allocation and use of resources*
    - *Improved stakeholder confidence and trust in the response*
    - *Ability to handle uncertainty and variability*
    - *Alignment of key team members.*"

In alignment with the State Emergency Management approach, each region should create its own risk matrix. This dictates the hierarchy of risks which facilitates planning to ameliorate these risks.

Each health care and welfare organisation within a region should ideally develop their own COVID-19 risk matrix. If not already existing, it could be created with reference to the regional risk matrix; if already existing, it could be revised with reference to the regional matrix. This process would increase the level of coordination intrinsic to the matrix.

These risk matrices would be compiled, and the regional risk matrix revised in light of any additional risks brought to light.

In the context of organisations already struggling to cope with their current workloads, allocating resources to expeditiously create a risk matrix would need deliberate prioritisation. In the words of the local engineer, however, "*You might not think you can afford the time to do it – but in fact you can't afford not to do it*".

These risk matrices, in combination with intelligence provided to and flowing through a central point, would provide the basis for a regional, whole-of-system coordinated response.

An example of a regional risk matrix, created by the authors, along with time generously donated Marika Mackenzie (HealthPathways Manager, HNECCPHN), is included in Appendix D.

11 Leveraging available Human Resources

11.1 GP leadership

General Practice is central to primary care, and typically the entry point for most people into the health care system.[39] GPs are the bridge between primary and tertiary care for many patients, playing a key role in helping patients navigate the wider complex healthcare system.[40] In that context, they have a particular insight into both patients needs, and the mechanisms by which these needs can be satisfied.

In that "bridge" function, GPs can also bring a systems-perspective and connection to diverse services and people that is difficult to achieve by other means.

Examples of GP-led COVID-19 related activities in the lower Hunter region include:

- Education
    - COVID-19 health literacy promotion via multi-modal channels (print media/newspapers, radio, television, social media)
    - COVID-19 education to local schools
- Advocacy
    - Press releases and provision of patient/relative resources to support local Aged Care Facilities in restricting patient access
    - Press releases to advocate for retailers to improve COVID-19 safety for customers
    - GP telehealth, prescribing issues and internet bandwidth issues forwarded to DOH and the Principal Medical Advisor
- Communication
    - Use of a GP mail group with >400 members to rapidly disseminate information including:
        - Changes to COVID-19 guidelines
        - Notification of localised outbreaks with associated localised changes to testing guidelines
        - Changes to local COVID-19 services (e.g. new respiratory clinics & screening centres)
        - Notification of COVID-19 education events
    - GPs as channels for rapid communication and feedback to both LHD & PHN regarding COVID-19 related issues
        - Criteria being applied (or not applied) at LHD screening clinics
        - Supply chain concerns re: PPE
- Planning
    - Use of GP clinical editors in producing COVID-19 HealthPathways
    - GPs with a special interest in aged care facilitating the development of and participating in a local COVID-19 aged care working group

[39] https://grattan.edu.au/wp-content/uploads/2018/07/906-Mapping-primary-care.pdf

[40] https://www.aci.health.nsw.gov.au/__data/assets/pdf_file/0007/292561/Understanding_and_working_with_general_practice.pdf

- Introducing the use of a risk assessment approach to regional primary care & health/welfare COVID-19 planning
- Introducing the concept of using information technology systems to monitor aged care facilities, general practice, wider community health/welfare services, and home-monitoring of patients with COVID-19
- Elevating concerns from a local dentist re: contraction of services to LHD and PHN attention

Moreover, there are many GPs who have significant past or current experience in other fields, and may be available in different regions:

- Clinical governance
- Public Health – many public health physicians have a general practice background
- Emergency management/control – Australian Defence Forces reserve

The experience and skills of these GPs should be leveraged wherever possible, whether that be in formal roles or informal. Where there are GPs with multiple roles, and where GPs are connected via shared roles or regional GP associations, this can be particularly valuable.

11.2 Incident Control Systems & Ex-Australian Defence Forces

Having used a regional risk matrix to prioritised objectives, the management of these objectives by developing strategies and tactics needs to be managed

Where a regional organisation (e.g PHN) attempts to establish a COVID-19 whole-of-community emergency operations centre, either in part or in whole, as per the EMPLAN, the management structure should following Incident Control System (ICS) principles (Control, Planning, Operations, Public Information, Logistics). See Appendix A for a suggested list of Core Roles. This is the, "*common operating framework within which people can work together effectively to manage an incident. These people may be drawn from multiple agencies that do not routinely work together.*"

Some of the skills required in regional emergency response operation/centre will be available within the operating organisation (e.g. PHN). Others will not be available, or will not be available at an ideal level.

Under those circumstances, consider:

- Are there existing, available local GPs who may have those skills (e.g. for ICS/control experience, ADF-reserve or public health physicians)?
- Are there alternate sources of those skills that can be accessed (e.g. logistics controller via ex-ADF personnel)?[41]

Where additional human resources need to be brought in, there will be costs involved (See Appendix B for a sample Budget). Where there are funding issues, consider utilisation of flexible funds where available, or approaching alternate sources for sponsorship (e.g. private health/charitable foundation).

[41] SoldierOn is a source of ex-ADF personnel (https://soldieron.org.au/about-us/our-story/)

12 Support from Organisations – "Buy-in"

When an organisation(s) attempts regional whole-of-system regional coordination, unless this is housed at the REOC, it will not have statutory authority. In that context, the success of this group is dependent on the involvement of healthcare and welfare organisations in the region. Buy in will depend on:

- a recognition of the enormity of the situation facing our region
- a recognition that risks recognised and mitigated as a group will produce a better outcome than by individual organisations acting alone
- a recognition that risks recognised and mitigated in outlying
- the recognition of the utility of regional whole-of-system coordination, including recognising:
    - the benefit of each organisation developing their own strategic risk matrix (if not already developed)
    - the benefit of sharing their organisational risk matrix with a centralised co-ordinating committee
    - the benefit of strategic planning to minimise the identified hierarchy of risks identified at both organisational and regional levels
    - the benefit of having a co-ordinating organisation with suitable emergency management expertise to assist with co-ordinated multi-service responses to realised risks
- the endorsement and participation of lead stakeholders with the region (e.g. LHD, PHN)
- minimal additional costs to organisations
- effective representatives respected in their communities, with the ability to make change within their organisations
- perception of ability to help "flatten the curve"
- perception of ability to act quickly
- demonstration of change within the communities
    - each group planning and acting within their matrix high risk areas and recognising priorities
    - effective coordination within the region following identification of high-risk elements within the regional risk-matrix

13 Demonstration of effectiveness

Where an organisation(s) has committed to regional whole-of-system coordination, there must be a means to measure effectiveness. Suggested measurables are:

- development of mitigation plans utilising multi-service responses
- management of realised risks using a co-ordinated multi-service response
- continued participation by organisations/groups
- regular reporting by groups, both individual groups to the regional coordinating organisation, and by the regional coordinating organasation to the groups, including the sharing of critical data
- Data
    - Number of organisational risk matrices submitted
    - Number of multi-service mitigations plans developed

- Number of realised risks co-ordinated/managed
- Number of organisations/groups represented and retained
- Monitoring responses to communications (*is the message getting out*)
- Monitoring group satisfaction and knowledge (*is there a subjective increase in confidence with management of the patients/community/pandemic)*
- Logistics (*distribution of materials e.g. masks*, *hand-sanitiser*)

14 Conclusion

"Siloing" is an age-old problem that afflicts our health system, despite the best-intentions of all participants. Under normal circumstances, this disconnectedness simply makes the system variably inefficient. But this current COVID-19 situation is not normal at all. It will strain every facet of the health and welfare system to breaking point and beyond. This will not be about the inefficient delivery of normal services.

COVID-19 will brutally exposed every weakness in the system.

If community health and welfare services fail, this will cascade into increased hospital presentations, including of non-COVID-19 presentations, at precisely the time when the system cannot cope with increased demand. If this cascade develops from a trickle into a flood, this will in turn lead to increased adverse patient outcomes including death; and also vastly increased avoidable distress experienced by patients, staff and the community at large.

Utilising well-established and accepted emergency management techniques and structures, and applying them at a whole-of-system level is our best change of identifying and mitigating healthcare and welfare system weaknesses.

In the absence of a clear place where responsibility for this lies, it is up to each region to decide how to best implement this. The beginning is a regional risk assessment, then prioritisation depending on that risk assessment, then management of risks according to resources available in the region.

Organisations and resources within a region may include:

- The Local Health District (or equivalent)
- The local Primary Health Network
- The Regional Emergency Operations Centre
- Local Emergency Operations Centres
- Independent GP Organisations
- Community organisations (e.g. the Sydney Alliance[42], the Hunter Community Alliance[43])

The implementation of a local (e.g. PHN-based) Emergency Operations Centre is one option. However, it will be challenging for any one organisation to take a clear lead in coordinating a whole-of-community response, in which case an "alliancing" approach may be more realistic:

- "*The approach [uses] alliancing as a mechanism for achieving consensus on integrated service development, particularly in areas where the system is complex, and there are a number of different parties, professions and organisations which need to work together…the priority is effective service design, which can then be implemented with whatever contractual mechanism is appropriate…*"[44]
- *"[members should]…have [the] capacity to bring resources to the alliance table so decisions can be implemented; and very importantly, cast aside sectoral interests, work to assist one*

[42] https://www.sydneyalliance.org.au/
[43] https://www.sydneyalliance.org.au/hunter_community_alliance
[44] https://www.healthpathwayscommunity.org/News/Latest-Community-News/ArticleID/559/Canterbury-Health-System-making-its-mark-on-the-world

another, and take a whole-of-system approach to planning and decision making based on what is best for the patient and health system."[45]

Where a formal community alliance structure already exists, this may be a significant lever in attempting to coordinate a whole-of-community COVID-19 response.

The bullet train has left the station. It is still on the tracks, but how this journey ultimately ends is yet to be determined.

[45] https://www.mja.com.au/journal/2014/201/3/what-should-governance-integrated-care-look-new-zealands-alliances-provide-some

15 Appendix A - Core Roles

15.1 Joint Operations Coordinator

- Role:
  - Reports to ….
  - Oversee the functions of the Joint Operations Committee (JOC)
  - Monitor core members functions and achievement of goals
  - Provide a safe working environment for core participants
  - Monitor the changing environment
  - Ensure a flexible response to a rapidly changing environment
  - Ensure liaison by the JOC with Groups
  - Ensure communications from the JOC to Groups are achieved in a timely regular manner
  - Encourage the timely and regular reporting of the Groups to JOC
  - Liaison with sponsor regarding personnel employment requirements
- Position Requirements:
  - Background in health, preferably in clinical and administrative roles, minimum experience of 10 years
  - Understanding of the functions of the health community
  - Flexibility in rapidly evolving systems and redevelopment or modification of systems together with documentation of changes
  - Good communication skills

15.2 Project Manager

- Role:
  - Reports to the Joint Operations Coordinator
  - Development and monitoring of the project
- Position Requirements:
  - Project management experience to a high level, minimum experience of 10 years
  - Flexibility in rapidly evolving systems and redevelopment or modification of systems together with documentation of changes
  - Good communications skills

15.3 Logistician

- Role:
  - Reports to the Joint Operations Coordinator
  - Development and monitoring of logistical processes
  - Liaison with Groups logisticians to ascertain requirements
  - Assist Groups in sourcing required goods and services
  - Develop an understanding of distribution resources to facilitate transfer of goods to groups
- Position Requirements:
  - Logistician experience to a high level, minimum experience of 10 years
  - Familiarity with medical supply requirements, or access to that knowledge
  - Flexibility in rapidly evolving systems and redevelopment or modification of systems together with documentation of changes
  - Good communications skills

15.4 Administration Manager

- Role:
  - Reports to the Joint Operations Coordinator
  - Development, documentation and monitoring of administrative processes
  - Liaison with Core members to assist in developing standard requirements for documenting processes, workflows and tasks performed
  - Liaison with Groups to ensure adherence to JOC administration requirements
  - Assist in development and monitoring conditions of employment
- Position Requirements:
  - Administrative experience to a high level, minimum experience of 10 years
  - Experience in a structed environment
  - Flexibility in rapidly evolving systems and redevelopment or modification of systems together with documentation of changes
  - Good communications skills

15.5 Communications Manager

- Role:
  - Reports to the Joint Operations Coordinator
  - Develop, document and monitor communication resources
  - Undertake communication on behalf of JOC
  - Educate Groups which may not have the skills or abilities to communicate effectively and assist if necessary
  - Liaison with Core members to assist in developing standard requirements for communication
- Position Requirements:
  - Communication experience to a high level, minimum experience of 10 years
  - Familiarity and experience with means of communication including media within the Hunter Valley
  - Flexibility in rapidly evolving systems and redevelopment or modification of systems together with documentation of changes
  - Good communications skills

15.6 Health Planner

- Role:
  - Reports to the Joint Operations Coordinator
  - Development health plans in a rapidly changing environment
- Position Requirements:
  - Health planning experience at a senior level in multi-faceted environments, minimum experience of 10 years
  - Flexibility in rapidly evolving systems and redevelopment or modification of systems together with documentation of changes
  - Good communications skills

16 Appendix B - Budget

Funding for staff is minimal; most representatives will be paid by their respective organisations. The positions of Joint Operations Co-ordinator, Project Manager, Logistician, Communications Manager, Administration Manager and Health Planner will require independent funding. Some savings to these employment costs may be achieved should positions be able to be transferred and funded from participating organisations or groups. Additional funding will be required for administrative staff, to be determined. Overheads such as office space, consumables and administrative costs would be required, although it is noted that the operation of this group would largely be from remote locations linked by teleconferencing and document sharing systems. These costs may be covered from alternative sources or a sponsoring organisation.

Budgets would be indicative dependent on the workload of the group.

The positions of Joint Operations Co-ordinator, Project Manager, Logistician, Communications Manager, Administration Manager and Health Planner should be independent of any interest group to ensure unbiased assessments and management.

16.1 Staffing

Core members

- Joint Operations Co-ordinator - $125/hr, full-time
- Project Manager - $125/hr, full-time
- Logistician - $40/hr, full-time
- Administration Manager - $50/hr, full-time
- Communications Manager - $40/hr, full-time
- Health Planner - $40/hr, full-time (*or Public Health Physician equivalent, part-time at elevated rate*)
- ***Estimated total monthly salary = $69,160***

16.2 On-costs

- Logistics
- Volunteer support (telecommunications, transport)
- Communication
- ***Total - $20,000/month***

16.3 Corporate services

- Information Technology
    - Telephony – personal *or* HNECCPHN, $0
    - Videoconferencing – Skype for Business/Microsoft Teams – HNECCPHN, $0
    - Document sharing – OneDrive/Office365 – HNECCPHN, $0
- HR – HNECCPHN, $0
- Insurance – HNECCPHN, $0
- **Total - $0/month**

Total expenses/month = $89,160

Start-up cost (minimum 3 months) = $267,480

17 Appendix C – Action Plan

2 week timeframe, as of 26/03/20 1116hrs

Item No.	*Action*	*Why*	*Who*	*When*	*Commenced*	*Completed*	*Notes*
1	Contact List 1. Di Bridger - 2. Gino Bortolloto - 3. Lee Fong -	Communication, complimentary skill-set	All	27-Mar-20		26-Mar-20	contacts established for email, phone, skype, whatsApp
2	JOC team recruitment strategy	Good fit for task & team	Di/Gino			23-Mar-20	ensure core participants have complementary skills and that strengths fulfil team requirements; approaching Soldier On, awaiting definitive response
3	prepare JOC risk matrix for Hunter New England	draft completed	Lee/Gino/MM/Di		22-Mar-20	25/03/2020 (first iteration)	
4	prepare JOC action plan				26-Mar-20		
5	preliminary meetings for preparation of concept, development of concepts			22-Mar-20		22-Mar-20	22/3/20 - initial meeting; 23/3/20 to start JOC risk matrix; 23/3/20 - completion of first draft risk matrix;
6	develop Case for a Joint Operations Committee	document for presentation to participating organisations	Lee		25-Mar-20		25/3/20 - document being revised/expanded
7	develop Joint Operations Committee Core Roles	use in staff selection	Di			25-Mar-20	
8	develop Joint Operations Committee Function Brief	brief representation of the functions of the JOC	Di			25-Mar-20	

9	liaison with sponsors		Lee	27-Mar-20	23-Mar-20		26/3/20 - teleconference with NIB foundation; 27/3/20 - NIB foundation will make their decision
10	liaison with stakeholders		Lee/Di/MM	03-Apr-20	23-Mar-20		23/3/20 - discussed with CEO HNECCPHN; 24/3/20 - discussed with exec HNELHD;
11	develop ongoing funding streams and strategies to manage same	employment of staff requires guaranteed sustainable funding	Lee/Di	03-Apr-20	23-Mar-20		23/3/20 - discussed with CEO Honeysuckle, potential for accessing NIB Foundation
12	Administration preparation - staff	Recruit required staff	Admino/Di LF	03-Apr-20	23-Mar-20		ensure complementary skills and that strengths fulfil team requirements; 23/3/20 - phone call to Soldier On; 24/3/20 - email to Soldier On; 26/3/20 - no clear response from Soldier On, consideration given to NIB as a source of staffing/support
13	Administration preparation - corporate advice. Ensure compliance with legal requirements	Request advice from Sponsor	Admino/Di LF	03-Apr-20			
14	Administration preparation - accommodation	Request assistance from sponsor	Admino/Di LF	03-Apr-20			
15	Administration preparation - HR. Ensure compliance with employment legislation WHS requirements	Request advice from Sponsor	Admino/Di LF	03-Apr-20			
16	Administration preparation - IT. Access to VIDCON faciities and IT software as required to facilitate cloud access appropriate filing of documents and emails. Dedicated walled server	Request assistance from sponsor	Admino/Di LF	03-Apr-20			
17	Establish a data/cloud base repository where all communications/letters/emails/critical	Central point where everything lives. Make sure we are all talking off the same	Admino, Di, Lee, Gino	03-Apr-20	25-Mar-20		25/3/20 - established OneDrive as interim file sharing solution

	information resides. Need to be able to tap into from anywhere	page. Provide access to specific areas for specific people or groups.					
18	Compile list of every target group in region, location, discipline, etc	Regional scan of community target groups & organisations	PHN	03-Apr-20			25/3/20 - HNECCPHN is commisioning surveillance app to monitor status of ACFs and General Practices in our region. Potential for that to expand. In the interim, need to compile more comprehensive list relevant to JOC operations. ?to discuss with charitable organisations, local councils etc.
19	Prepare a likely schedule of when the system will start to show signs of stress	Attempted forecasting to aid planning process	Gino, Lee, Di				26/3/20 - access estimates of pandemic peak; develop key indicators eg, number of practices closed, ICU overwhelmed, staff absences GP/RN/clerical staff
20	Prepare a PPT for presentation at stakeholder information sessions	A succinct delivery to GP's is essential	Di/Gino				
21	Presentations to stakeholders including GPs/PHN/medical community/charities/individuals/media. Two way sessions, what we can offer, what their concerns are etc	The wider community need to know who we are and what we are here to do.	Di/Lee/ Gino				
22	From item above, establish a list of critical areas where we can have some input directly to the concerns of stakeholders, including the broader community	Increase stakeholder confidence	Lee/Di				

23	Establish a line of communications for stakeholders to contact the JOC.	Needs to be responsive & sustainable; including feedback, and requests for assistance (including logistics); may include directing to other resources (e.g. Healthpathways, GPDA mail group)	Admino, Di Lee				
24	Explore what assistance we can get from State/Feds….(need to know what we want first) in terms of supplies and money to pay people in areas of need, eg transport etc.	Resources are critical	Lee, for materials loggie				
25	Advertise for people (role specific) that may be able to help. Doctors (retired, redeployed), nurses, drivers etc. Should be a basket of people that can help given redundancies that have already occurred.	If we get to system overload scenarios then an army of pre arranged support people will be critical. Preferably paid, but some volunteer capacity also e.g. pharmacy home delivery, grocery home delivery, welfare checks for vulnerable groups	Di, Admino/PHN				

18 Appendix D – Regional Risk Matrix

1	ACTIVITY	RISK DESCRIPTION	OUTCOME	Area of (highest) impact	LIKELI-HOOD (current controls)	CONSEQUENCE (current controls)	INITIAL RISK (current controls)	ABILITY TO INFLUENCE	RISK ACCEPTED	RISK TREATMENT (control)	LIKELIHOOD (control)	CONSEQUENCE (control)	POST CONTROL RESIDUAL RISK
2	TYPICAL PATIENT PASSAGE THROUGH COVID-19 PHASE												
3	Limited patient understanding of options available	Patient makes suboptimal decision based on incorrect or inapplicable resourcing of applicable protocol	Slow response, poor outcome for patient, practices and ED, increased chance of transmission	Patients/General Public	B - Likely	1 - Insignificant	B1	Low	Yes	Ability to influence is Low, risk - medium - accept risk.			N/A

4	Limited patient understanding of options available	Patient makes suboptimal decision based on incorrect or inapplicable resourcing of applicable protocol	Slow response, suboptimal outcome for patient, practices and ED, increased transmission	Practice	B - Likely	3 - Moderate	B3	Partial	No	1. Improve quality of HealthDirect resources, encourage improvement to clinical governance 1a. Correct NSW triage 1b. Include direct connection to cold/flu symptom checker 2. Clear concise and available directions in national context	C - Possible	3 - Moderate	C3
5	Unnecessary non-COVID-19 presentation to practice	Routine consultations undertaken unneccessarily.	Practice becomes overloaded, functional disruption	Practice	A - Almost certain	4 - Major	A4	Moderate	No	1. Triage, establish system/workflow to triage unneccessary non COVID-19 2. Establish a practice process to obtain scripts and referrals without face to face consultations for patients of the practice	B - Likely	3 - Moderate	B3

6	Unnecessary COVID-19 related presentation to practice (symptomatic or non symptomatic)	Consultations undertaken unneccessarily.	Practice becomes overloaded, functional disruption, potential transmission	Practice	A - Almost certain	4 - Major	A4	Moderate	No	1. Establish and maintain system/workflow to triage unneccessary COVID-19, especially in context of rapidly change MBS telehealth criteria	B - Likely	3 - Moderate	B3
7	Non-triaged respiratory presentations	Exposure to patients and staff	Transmission of COVID-19	Patients/Staff	A - Almost certain	4 - Major	A4	Moderate	No	1. Establish system to screen patients prior to entry to practice 2. Adopting procedures for best practice in accordance with HealthPathways	B - Likely	3 - Moderate	B3
8	PPE use	Heightened exposure to COVID-19 for non or incorrect use; wastage if used outside of	Transmission of COVID-19	Patients/Staff	B - Likely	3 - Moderate	B3	Moderate	No	1. Adopt procedures for best practice use of PPE for staff and patients	B - Likely	3 - Moderate	B3

		indications (P2/N95)											
9	Adherance to best practice by medical facilities generally	Suboptimal management	Transmission of COVID-19	Patients/staff/ general public	B - Likely	3 - Moderate	B3	Moderate	No	1. Adherance to procedures for best practice in accordance with HealthPathways	C - Possible	3 - Moderate	C3
10	Testing of COVID-19	Limited access to tests; non-compliance with testing guidelines	Transmission of COVID-19 due to undiagnosed cases; facility crowding, decreased access and testing delays due to	Patients/ general public	B - Likely	3 - Moderate	B3	Moderate	No	1. Consistent protocol of who is to be tested, dissemination of testing facilities/locations 2. Review and assess current testing locations and rationalisation of same 3. clear advice on changes to testing requirements - via Healthpathways 4. public messaging re: the above	C - Possible	3 - Moderate	C3

			unnecessary testing;										
11	Patient transfer to home or hospital or other location	Exposure of persons to infected patient	Transmission of COVID-19	Patients/general public/ transport staff	C - Possible	3 - Moderate	C3	Moderate	No	1. Policy and coordination of patient transport & ambulance transfers, determine alternative transport options	C - Possible	3 - Moderate	D3
12	Vulnerable patient transfer (eg homeless, elderly, lone	Lack of sufficient patient care	Sub optimal health outcome, potential transmission of	Patients/general public/ transport staff	B - Likely	4 - Major	B4	Low	No	1. Additional dwelling/transport capacity required, identify existing capacity and potential opportunities	C - Possible	4 - Major	C4

	livers, etc)		COVID-19										
13	GENERAL PRACTICE SPECIFIC COVID-19 ISSUES												
14	Implementation of best practice	Patient /treatment is not of the highest standard available	Suboptimal health outcome	Practice/ general public	C - Possible	3 - Moderate	C3	Moderate	No	1. GP alignment with Health Pathway guidelines. 2. Consistent industry approach required	D - Unlikely	2 - Minor	D2
15	Staff losses, temporary/ permanent, due to illness, retirement, death and other duties, (eg carer)	Aged staff (and/or other high risk groups) unwilling to continue. Temporary/ permanent interruption to practice. Staff losses due to illness, retirement, death and other duties (e.g. carer)	Inability to provide service	Practice	A - Almost certain	5 - Extreme	A5	Low	No	1. Provide personal support and counselling 2. Explore potential for resource to provide alterative practice options, eg telehealth 3. Employment with alternate employers and/or situations (e.g. GP Access After Hours Telehealth/ACE support) 4. Facilitate redeployment and consolidation of staff and resources	A - Almost certain	5 - Extreme	A5

16	Practice closure	Loss of service provision (patient load migrates)	System element breakdown	Practice	B - Likely	5 - Extreme	B5	Low	No	1. Provide business management support 2. Explore potential financial support (government packages) 3. Facilitate redeployment and consolidation of staff and resources, including advocacy for temporary suspension of provider number location restrictions, and implementation of general practice surveillance systems (active centralised monitoring of staffing levels)	B - Likely	4 - Major	B4

17	PPE/ consumables availability	Inabiity to provide a safe working or patient environment	Transmission of COVID-19	Practice	B - Likely	3 - Moderate	B3	Moderate	No	1. Active monitoring of levels of PPE stocks across General Practices 2. Ensure the allocation and delivery of sufficient PPE to cover needs 3.Centralisation of regional resources to ensure appropriate deployment of supply 4. Seek alternate sources of PPE 5. *Note also importance of PPE supply to other agencies (e.g. support services for isolated elderly, homeless)	B - Likely	2 - Minor	B2

18	Loss of practice income and reduced profitability of operations	1. Reduced billings due to higher rate of bulk billing 2.Telehealth consultations inability to charge co-payment 3. Not all consultations are eligible for MBS 4. Reduced general practice activities 5. Higher cost of employment as a proportion of income	Financial stress to practice and potentially practice closure. Reduced employment, loss of registrar training positions	Practice	A - Almost certain	5 - Extreme	A5	Low	No	1.Telehealth - advocate for MBS restrictions to be broadened (low) 2.Facilitate redeployment and consolidation of staff and resources 3. encourage practice (practice owners, associates, contractors, staff) to seek independent financial advice	A - Almost certain	5 - Extreme	A5
19	Practices undertaking elevated duties during pandemic	Increased mental and physical exhaustion and stress amongst workforce	1. Reduced personal functional capacity,	Practice	A - Almost certain	4 - Major	A4	Moderate	No	1. Provide coordinated response to support staff 2. Explore support options	B - Likely	4 - Major	B4

			absence from work 2. Increased stressors										
20	General pandemic event exposure	Psychological impacts	1. Reduced personal functional capacity, absence from work 2. Increased stressors	Patients/practice	A - Almost certain	4 - Major	A4	Moderate	No	1. Provide coordinated response to support staff 2. Explore support options 3. Facilitate redeployment and consolidation of staff and resources if necessary	B - Likely	4 - Major	B4
21	Palliation of patients in home or residential aged care	Practice unable to support palliation process	Distress to the patient. Distress to family, RACF's,	Patients	A - Almost certain	4 - Major	A4	Moderate	No	Existing PHN LHD working party addressing issue - need to consider pre-emptive steps and surge capacity	UNKNOWN AT THIS STAGE, Procedural outcomes have not been distributed		

	facilities (RACF)		support staff and clinicians										
22	Certification of Life Extinct, Death Certification, Cremation certficates	Insufficient nursing staff (life extinct) or medical practitioners available to undertake certification	Delayed process	Patient/staff/families/RACF staff/Home care staff	A - Almost certain	3 - Moderate	A3	Moderate	No	1. Existing PHN LHD working party addressing issue	B - Likely		
23	AFTER HOUR SERVICES												
24	Telephone triage	Service capacity is exceeded at peak load times	Patient self divert to emergency departments	Patients, ED, Practice	A - Almost certain	3 - Moderate	A3	Moderate	No	1. Pre- & Redirection to HealthDirect website/app - review existing telephone scripts 3 Explore overflow services that exist 4. Increase capacity of hardware 5. increase workforce	A - Almost certain	3 - Moderate	A3

25	Provision of basic service	Service capacity is exceeded	Patient self divert to emergency departments	ED, service/practice	A - Almost certain	4 - Major	A4	Moderate	No	1. Increase coordination of after hours services 2. explore ED staff willing to redeploy to be available in after hours services 3. Provide live view to ED of after hours service	A - Almost certain	3 - Moderate	A3
26	RESIDENTIAL AGED CARE FACILITY												
27	Generic age care response	Inadequate response to high risk category	Poor patient treatment outcome	Patients	A - Almost certain	5 - Extreme	A5	Low	No	1. Existing PHN LHD working party addressing issue - need to consider pre-emptive steps and surge capacity	UNKNOWN AT THIS STAGE, Procedural outcomes have not been distributed		

28	RACF management of palliation	Increased patient load, poor quality deaths	Distress to patients, family, support staff	Patients/family/staff and asset nurses and ACE service	A - Almost certain	4 - Major	A4	Moderate	No	1. Increase ASET nurse capacity 2. Increase after hours call centre capacity 3. Education and planning to RACF's regarding end of life care 4. Provide third party surge capacity	A - Almost certain	3 - Moderate	A3
29	ACE telephone advice	Service capacity is exceeded at peak load times	RACF divert patients to emergency departments	ED/Patients/RACF's/ Ambulance/medical deputising services	A - Almost certain	3 - Moderate	A3	Moderate	No	1. Increase ASET nurse capacity 2. Increase after hours call centre capacity 3. Education and planning to RACF's regarding end of life care	A - Almost certain	3 - Moderate	A3
30	ALLIED HEALTH PRIVATE PROVIDERS												
31	Provision of general activities	Industry not aligned with best practice guidelines	Lack of response continuity. Limited and	Patients, staff	A - Almost certain	2 - Minor	A2	Low	No	1. Existing PHN working party addressing issue	UNKNOWN AT THIS STAGE, Procedural outcomes have not been distributed		

			inconsistent outcomes										
32	MACRO REGIONAL ISSUES												
33	Functional crisis	Macro or micro event or events render key services provided by an area or areas of the health care system non-functional.	Complete or significant loss of key functional service causing severe impact on systems ability to cope at critical time.	Dependant on nature of crisis	B - Likely	4 - Major	B4	Moderate	No	Develop Crisis Management Plan to ensure: 1. Key entities are aware of the problem in a timely manner, with the benefit of all key data 2. Correctly detailed communication of 'issue' to prevent panic 3. Possible isolation of the problem 4. Rapid response of relevant service groups, e.g. police, fire brigade, public health unit, etc	B - Likely	3 - Moderate	B3

34	Aboriginal & Torres Strait Island Communities	Increased mortality risk, faster spread within communities, decreased access to services	Increased mortality	Patients	B - Likely	5 - Extreme	B5	Moderate	No	1. Education 2. mobile respiratory clinics 3. restrict visitors 4. liason with Aboriginal health	A - Almost certain	2 - Minor	B4
35	Refugees and asylum seekers	inability to understand health warnings, reduced access to communications sources, reduced income and/or access to government grants as are non residents	increased infections, transmission rates and mortality	Community	B- likely	3- Moderate	B3	Moderate	No	1. Engagement with refugee organisations 2. Ensure education using own languages 3.assess needs of these communities and assist in resolution	C - Possible	2 - Minor	C2
36	Homeless	Increased mortality risk	Increased mortality	Patients	B - Likely	5 - Extreme	B5	Moderate	No	1. maintain existing services 2. Increase shelter availability	C - Possible	2 - Minor	C2

37	NGOs, Religious organisations and charities providing patient-care services (e.g. community aged care, disability services, outreach to isolated elderly)	inability to undertake caring roles or provide assistance to clientele due to reduced volunteers, inability to provide PPE to visitors and clientele	increased infections, transmission rates and mortality	Community	B - Likely	5 - Extreme	B5	Moderate	No	1.Determine needs of religious and charity organisations 2.consider surveillance systems to monitor staffing and PPE levels (e.g. VoXPol or similar - https://www.youtube.com/watch?v=-AzSpt2kVjI&list=UU3HGmC5uTCNcJDwGQIXAbCw) 3. provide these organisations with access to PPE 4. Encourage and co-ordinate consolidation and redistribution of workforce if necessary 5. expand and harness volunteer groups within these organisations to meet neeeds unmet by government sector (e.g. checking on isolated elderly, delivery services to isolated elderly)	C - Possible	2 - Minor	C2

38	Use of risk matrix	Use of this risk matrix for other regions or areas. This risk matrix covers risks associated with more urbanised areas of the Hunter New England/Central Coast. Other areas, such as more rural remote regions, will have risks that are not covered herein.	Inadequate management outcomes. Lack of response to risks associated with region specific issues.	Patients	C - Possible	2 - Minor	C2	High	No	1. Each region to undertake a risk assessment that is unique to the region to which it relates	B - Likely	4. Major	D1
39	Screening clinics (LHD fever, community respiratory clinics, private	Uncoordinated approach to general screening and testing protocol	Suboptimal use of limited resources, increased risk of	Practice, general community	A - Almost certain	4 - Major	A4	Moderate	No	1. Identifying areas of need for screening and potential options. 2. Explore suitable available stations as required 3. Advising GP's of locations of various screening clinics	B - Likely	3 - Moderate	B3

	patholog y, GP pop ups)		exposu re										
4 0	Test results	Delays of pathology results	Potenti al increas ed exposu re, lack of timely respon se to patient s needs	Patients	B - Likel y	3 - Moder ate	B3	Low	No	1. Provide patient advice regarding quarantine and isolation and exacerbation of symptoms to limit impact	B - Likely	2 - Minor	B2

41	General community health services (outpatients, community nursing, day programs)	Services reduced or terminated	1. Interuption to clincal services 2. Deterioration in wellbeing of all patients and affected community members 3. Potentially longer hospital stays for patients	Patients	A - Almost certain	3 - Moderate	A3	Low	No	1. Identification of most vulnerable patients and develop strategies to limit impact	A - Almost certain	2 - Minor	A2

42	Response to critical COVID-19 issues	Delayed identification and communication of the issue and coordination of response	Suboptimal all issues relating to the management of the COVID-19 response	All	A - Almost certain	5 - Extreme	A5	Moderate	No	1. Undertaken risk assessment 2. Prepare implementation strategy 3. Provide sufficient dedicated resources to manage the implementation process outside existing 'day to day' management structures 4. Establish critical time schedule to ensure the various issues within the risk control framework are completed within the required time. 5. Ensure personal engaged have appropriate skill sets, eg. Project management, critical response, crisis management	A - Almost certain	4 - Major	A4

43	Provision of clinical guidance	The inability to provide appropriate clinical advice	Suboptimal management of patients with or without COVID-19	Patients/ general public/staff/clincians	B - Likely	3 - Moderate	B3	Moderate	No	1. Ability to access best practice guidelines via HealthPathways 2. If persisting uncertainty after accessing HealthPathways, revert to HealthPathways custodians	C - Possible	2 - Minor	C2
44	Reduced financial viabiity of service	Financial stresses caused by the effects of COVID-19 jeopardise the econimic viability of practices (or service providers)	Potential closure of practices, loss of staff	Practice, staff	B - Likely	4 - Major	B4	Low	No	1. Advise practices/staff to seek professional advice from established resources	B - Likely	4 - Major	B4
45	Recovery phase	YET TO BE CONSIDERED											

46	Liaison	The absent or ineffective coordination of a multi service response to COVID-19	Ineffective/ delayed response	Patients/ general public/staff/clincians	A - Almost certain	5 - Extreme	A5	Moderate	No	Establishment of a localised coordination centre Liaise with * police * ambulance * SES * Fire * Mortuary services * Funeral * Council(s) and Public State Authorities * Military * LHD	A - Almost certain	4 - Major	A4
47	Mortuary affairs	Interuptions to normal services, including 1. Certification of life extinct 2. Certification of death 3. Cremation certificate 4. Transport of patient (provision of body bags in	Suboptimal management of mortuary affairs	Patients/families/ staff	B - Likely	3 - Moderate	B3	Low	No	Liaise with providers	B - Likely	3 - Moderate	B3

		context of non hospital death) 5. Facilities for body storage 6. Internment or cremation access											
48	OPPORTUNITIES (unassessed)												
49	Opportunities	Centralised screening facility(ies) outside of existing infrastructure	Lessen impact on existing facilities										
50		Lessons learnt from experience of the pandemic	Better preparedness for next pandemic event										

51		Recognition of the benefits of telehealth	Increased efficiency of health care										
52		Increased use of technology	Increased efficiency of health care										
53		Increased connectivity between services	Increased general efficiency of service provisions										

CONSEQUENCE AND LIKELIHOOD TABLE

	1 INSIGNIFICANT	2 MINOR	3 MODERATE	4 MAJOR	5 EXTREME
A ALMOST CERTAIN	A1 MEDIUM	A2 MEDIUM	A3 HIGH	A4 EXTREME	A5 EXTREME
B LIKELY	B1 MEDIUM	B2 MEDIUM	B3 HIGH	B4 EXTREME	B5 EXTREME
C MODERATE	C1 LOW	C2 MEDIUM	C3 MEDIUM	C4 HIGH	C5 EXTREME
D UNLIKELY	D1 LOW	D2 LOW	D3 MEDIUM	D4 HIGH	D5 HIGH
E RARE	E1 LOW	E2 LOW	E3 MEDIUM	E4 MEDIUM	E5 HIGH

LIKELIHOOD

A ALMOST CERTAIN	Almost certainly will occur
B LIKELY	Likely to occur
C MODERATE	Moderate chance of occurrence
D UNLIKELY	Unlikely to occur
E RARE	Highly likely to occur

CONSEQUENCE -
PEOPLE OUTCOME

	CONSEQUENCE - INDIVIDUALS OUTCOME
1 INSIGNIFICANT	Advice only, home care, reassurance, minimal health risk
2 MINOR	Outpatient, oral medication, active monitoring, follow up consults, 25% risk
3 MODERATE	Hospitalisation 50% risk
4 MAJOR	ICU, ECMO 75% risk
EXTREME	Single or multiple fatality

	CONSEQUENCE - GENERAL PUBLIC OUTCOME
1 INSIGNIFICANT	Low exposure to small no. of people, low risk of significant harm
2 MINOR	Minor exposure to a relatively small group of people. Minimal risk of significant harm
3 MODERATE	Moderate exposure to a group of people with moderate chance of significant harm
4 MAJOR	High exposure to a large no. of people, high chance of significant harm
EXTREME	Extreme exposure to a large portion of the population, high chance of significant harm

CONSEQUENCE - PRACTICE OUTCOME

	CONSEQUENCE - IMPACT ON SERVICES, PRACTICE, Other
1 INSIGNIFICANT	Minor disruption, no material affect
2 MINOR	Minor single practise disruption
3 MODERATE	Minor district impact, several practices disrupted, non permanent
4 MAJOR	Significant regional impact, ongoing consequence for focus period

EXTREME	Major regional impact, severe inability of system to provide function