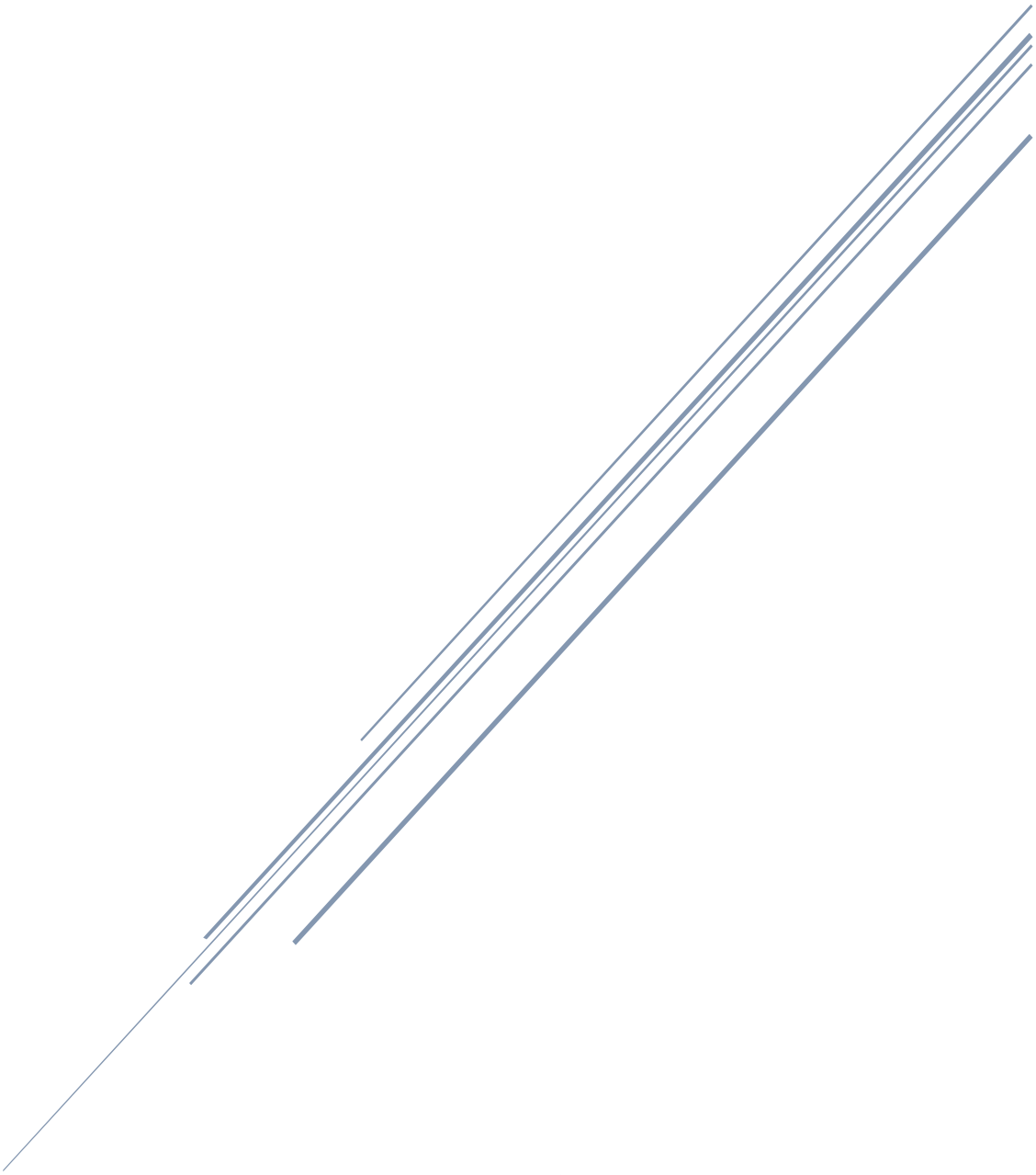
COVID-19 JOINT OPERATIONS COMMITTEE - PROPOSAL

Hunter New England Central Coast Region



Dr Lee Fong, Dr Diane Bridger (ret'd), Mr Gino Bortolotto

1 Table of Contents

Joint Operations Committee- Proposal

27th March 2020

2 Introduction

In order to develop a strategic, co-ordinated multi-service approach that specifically includes community services, emergency services, primary care and tertiary care, we propose that a community-based Joint Operations Committee (JOC) be created in our region to both prepare for and co-ordinate a multi-service response to COVID-19.

The aim of such a committee would include:

- Planning
    - Developing a regional risk-matrix
    - Co-ordinate crisis management plans that either already exist, or are expeditiously developed by represented organisations/groups to support the high-risk areas identified within the regional risk matrix (including the Primary Health Network, Local Health District, pharmacies, residential & community aged care, organisations providing services to the isolated and homeless, palliative care, funeral directors, local councils, businesses, religious institutions, ambulance, fire, police, SES, and the Australian Defence Forces)
- Crisis response
    - Co-ordination of a multi-service response to events as they are either anticipated or arise

3 Background

3.1 Expected Deaths

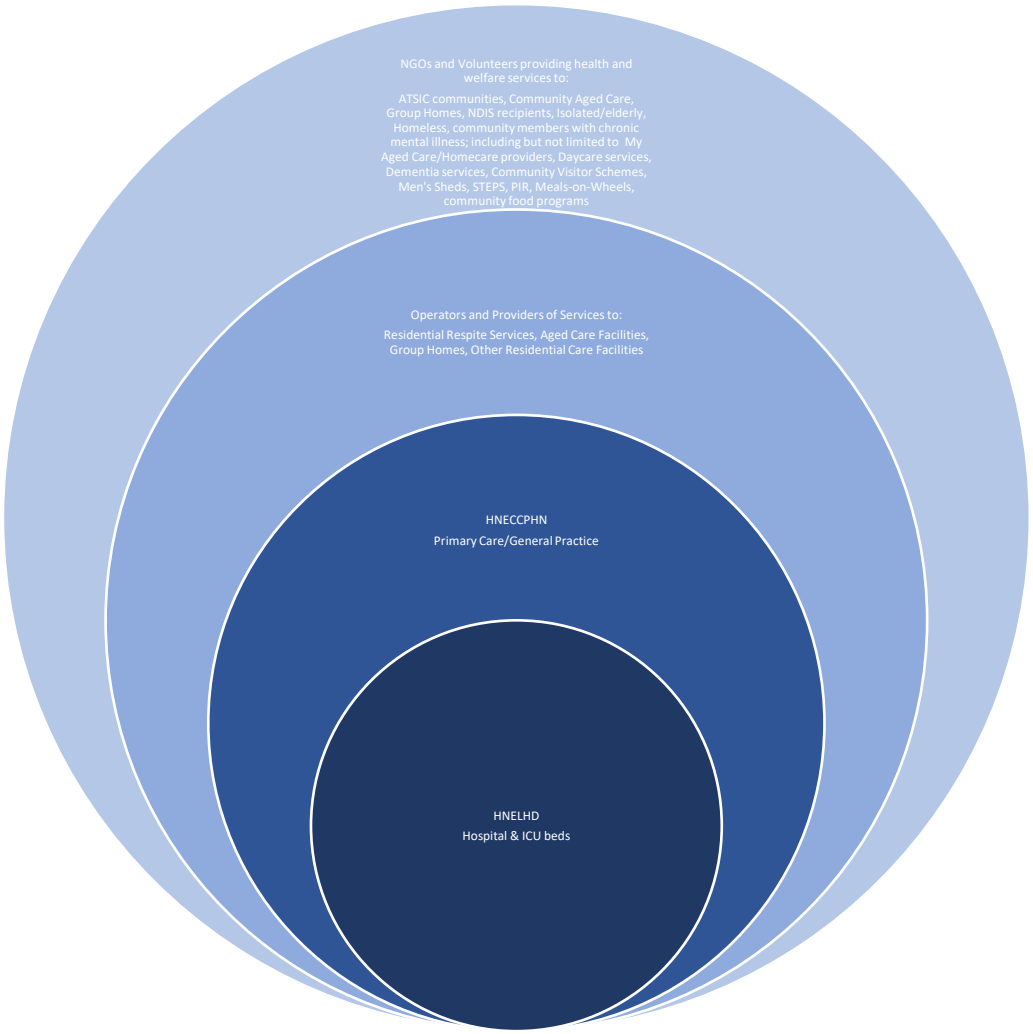
A presentation by NSW Health to hospital staff told them to expect between 4,000 and 12,000 deaths across the state during the 12 to 22 week "first wave" of COVID-19.[1] Other statistics included an expected 272,000 presentations of people seeking health advice, and the State ICU bed capacity being between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

The mortality data was based on 20% of the population contracting COVID-19, and a case mortality rate of between 0.6% and 1.8%.

[1] https://www.theguardian.com/world/2020/mar/12/hospital-staff-in-nsw-told-to-prepare-for-8000-coronavirus-deaths

The lower Hunter region has about 500,000 residents, and if the same mortality data is applied, this equates to between 600 and 1,800 deaths in our region. If the percentage of infected people rose to 50%, however, the number of deaths could be between 1,500 and 4,500.

3.2 The Cascade of 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.

Normal health and welfare services in the community aim to keep people well and out of hospital[2] with community services playing a key role in keeping people well by treating and managing acute illness and long-term conditions, and supporting people to live independently in their own homes.[3]

[2] https://www.health.gov.au/initiatives-and-programs/keeping-australians-out-of-hospital-initiative
[3] https://www.kingsfund.org.uk/publications/community-health-services-explained

When any component of a community service can no longer meet the care needs of a client, there is a 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, meals on wheels, laundry and cleaning services, and assistance with showering.

Once care needs exceed even these services, typically the 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; or the patient being symptomatic with COVID-19 and the service provider being unable to provide services due to a lack of PPE). The failure to supervise medication, provide shopping services/meals or nursing support would then lead to a decline in the health of the patient, leading to the patient care needs cascading rapidly to primary care or hospital levels.

The failure of normal community services to non-COVID-19 clients then will compound the direct COVID-19 related pressures that will already be stressing the hospital system.

A failure to mitigate this risk has significant potential to contribute to a catastrophic situation. The experience in Lombardy[4], one of the most wealthy regions in Europe, has been telling – "*The situation here is dismal as we operate well below our normal standard of care. Wait times for an intensive care bed are hours long. Older patients are not being resuscitated and die alone without appropriate palliative care, while the family is notified over the phone, often by a well-intentioned, exhausted, and emotionally depleted physician with no prior contact… But the situation in the surrounding area is even worse. Most hospitals are overcrowded, nearing collapse while medications, mechanical ventilators, oxygen, and personal protective equipment are not available. Patients lay on floor mattresses. The health care system struggles to deliver regular services — even pregnancy care and child delivery — while cemeteries are overwhelmed, which will create another public health problem. In hospitals, health care workers and ancillary staff are alone, trying to keep the system operational. Outside the hospitals, communities are neglected, vaccination programs are on standby, and the situation in prisons is becoming explosive with no social distancing*."

The conclusion of the clinicians at the Bergamo Hospital in Lombardy is that, "*Pandemic solutions are required for the entire population, not only for hospitals.*"

[4] https://catalyst.nejm.org/doi/full/10.1056/CAT.20.0080

3.3 Disaster Planning & Primary Care

3.3.1 NSW Health

In NSW the NSW Health Emergency Management Unit, Office of the State Health Service Functional Area Co-ordinator (HSFAC, previously known as the NSW Health Counter Disaster Unit), has the role of "*support[ing] the State HSFAC with coordinating emergency management planning, prevention, response and recovery effort across the health system*". The NSW Health document describing the role of the NSW Health Emergency Management Unit, "*Emergency Management Arrangements for NSW Health*"[5], is distributed the Public Health System and the Ambulance Service. In terms of inferring what is out-of-scope for HSFAC, the documentation does not refer to General Practice, Primary Health Networks (PHNs), Medicare Locals (predecessors to the PHNs), after hours services, pharmacies, aged care services, services to the homeless, local councils etc..

The NSW Health Services (HEALTHPLAN) Supporting Plan[6] 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)*".[7]

Whilst NSW Health may "request support", the experience during the Australian Bushfires of 2019-2020 does not suggest there is any overt co-ordinated planning between Tertiary and Primary Care.

As seen in the planning documents referred to above, besides the work of the Public Health Unit in identifying patients diagnosed with COVID-19 and tracing their contacts, the major focus of State Health and the Local Health Districts 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

3.3.2 The Bushfire Experience

The suboptimal co-ordinated planning and response between Local Health Districts and Primary Care was particularly evident during the Australian bushfires of 2019-2020.

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*"

[5] https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2012_067.pdf
[6] https://www.emergency.nsw.gov.au/Pages/publications/plans/supporting-plans/health-services-healthplan-supporting-plan.aspx
[7] Medicare Locals were superseded by Primary Health Networks in 2015

- *"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]

3.3.3 The Hunter New England Central Coast Primary Health Network (HNECCPHN)

The HNECCPHN maintains good communication and relationships with the Hunter New England Local Health District (HNELHD). The HNECCPHN response to COVID-19 has focused on discrete project work, consisting of:

- The distribution of facemasks to GPs
- Developing and maintaining relevant guidelines for GPs (Healthpathways)
- Considering locations for local community based respiratory clinics and assisting with applications
- Commencing an aged care working group in collaboration with the LHD.

[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/

Combined with continuing "business as usual", and then adding the burden of both commissioned services being affected by COVID-19 and the COVID-19 project work, the HNECCPHN has had neither the opportunity nor available resources to commence its own strategic planning with regard to COVID-19, let alone engage in a whole-of-community approach.

3.4 Principles of Disaster Planning and Management

Guiding principles of disaster management include:

- A comprehensive, all hazards approach
- Local disaster management capability[11]

3.4.1 A comprehensive, all hazards approach

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.*"

[11] https://www.disaster.qld.gov.au/dmg/Introduction/Pages/1-3.aspx

3.4.2 Local disaster management capability

The Adelaide COVID-19 Command Centre is a multi-agency centre that was launched on 20/3/19. The services they have on-site include GP and PHN liaison officers, state health, 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. Interestingly, it is not led by a Public Health Physician, but by the chief of the fire department. COVID-19 is being managed by South Australia as a "mass-casualty" event, and the fire department have extensive training in commanding in that area.[12]

In Western Australia, WA Health is also opening COVID=19 command centres[13] - *"This is one of four centres in which we are both co-ordinating 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."*

4 Discussion

4.1 COVID-19 as a Whole of Health System Stressor

HNELHD, most appropriately, has been focused on preparing for a surge in patient numbers, including extreme pressure on intensive care beds, likely to be compounded by likely loss of staff to quarantine, illness, or death.

HNECCPHN has been focused on maintaining guidelines, delivering PPE, and starting respiratory clinics.

Despite the cordial (some would even say enviable) relationship between HNELHD and HNECCPHN (and its predecessors, the Hunter Medical Local and the Hunter Urban Divison of General Practice), without a collaborative strategic planning approach to COVID-19, there has been little visibility regarding the capabilities or limitations of each other's organisations in this situation.

This is in not unusual. This simply reflects a multitude of similar, or even weaker links between LHDs and PHNs across the country.[14] In addition, this is before even beginning to consider the status (or absence) of links between LHDs/PHNs and the other healthcare and welfare providers in our community.

Under normal circumstances, this disconnectedness ("siloing") simply makes the system variably inefficient. But this current COVID-19 situation is not normal at all. It will strain every facet of the

[12] Personal communication, Robin Moore, PHN liaison, SA COVID-19 Command Centre

[13] https://www.watoday.com.au/national/western-australia/wa-police-commandeer-optus-stadium-as-emergency-headquarters-20200324-p54dgn.html

[14] "*There are examples of developing relationships between PHNs and LHNs and of co-commissioning. However much of that still depends on the good will of individuals rather than being systemic*." https://www1.health.gov.au/internet/main/publishing.nsf/Content/69C162040CFA4F7ACA25835400105613/$File/PHN%20Evaluation%20Final%20Report.pdf

health and welfare system to breaking point and beyond. This will not be about the inefficient delivery of normal services.

The failure of community health and welfare services will inevitably cascade into increased hospital presentations, including of non-COVID-19 presentations, at precisely the time when the system cannot cope with even normal demand; this will in turn lead to increased adverse patient outcomes including death; and also vastly increase avoidable levels of distress experienced by patients, staff and the community at large.

COVID-19 will brutally exposed every weakness. If the cascade of patient care through the community to the hospital turns from a trickle into a flood, the end result will be nothing less than catastrophic.

Some of these specific areas of concern include:

- PPE supplies, including to community services attending to vulnerable groups such as the isolated elderly and the homeless
- Palliation in aged care – who will do this, and how will this be done as nursing and GP staffing levels contract
- Support to General Practice in the event of staff losses or practice closure due to illness, retirement, death or other duties (e.g. carer)
- In the event of usual systems being overwhelmed, mortuary issues (including certification of death, medical certificates, transportation and storage)

The goal must be to strengthen as much possible every possible element of the community health and welfare system. The greatest whole-of-system resilience will come from encouraging each organisation to review and stratify their risks, mitigate whatever risks they can, and to be reinforced by co-ordinated plans that enable a multi-agency regional response to realised risks.

4.2 Risk Assessment as the Basis for Decision Making & Planning

To address the above issues in a systematic way, an overarching regional risk matrix has been drafted (*See Appendix E – Regional Risk Matrix*), with the goal of it forming a confident basis for decision making and planning; to reduce chaotic, unnecessary and inefficient planning activity; to maximise the effective allocation of resources; to reduce intra- and inter-service frustration by increasing inter-service alignment; to increase the ability of the region to manage uncertainty and variability; to reduce unnecessary community distress; and to increase service and community confidence in the response. (*See Appendix A – Composition & Process*)

To use face-masks as a specific example of a co-ordinated system approach to a COVID-19 response:

- PPE supply has been identified as a major risk in the COVID-19 response
- PPE, including face-masks, are required not just in hospital systems or general practice, but increasingly also in community health and welfare services as the pandemic increasingly spreads to community members being served by these groups
- Despite this, there is currently no system-wide way to:
    - Identify which organisations have face-to-face contact as part of their health or welfare services
    - Monitor what the PPE stocks are in these organisations
    - Explore options for sourcing PPE supplies from multiple streams (e.g. via corporate sponsorship)

    - Consolidate and centralise PPE stores for the community into a logistics hub
    - Process requests for, prioritise and distribute face-masks to these organisations as the need arises

This is exactly the type of task that a regional, whole-of-community, multi-service, strategically focused disaster management team (Joint Operations Committee/"JOC") could address.

For example, a NHS "app" currently being adapted by HNECCPHN to provide aggregated data about staffing, activity and PPE levels from aged care facilities and GPs in our region could easily be deployed for use by other community health and welfare organisations. The intelligence from this surveillance system could then be used by a regional Joint Operations Committee to anticipate and respond to dwindling PPE levels from a centralised logistics hub, thus helping to preserve service capacity that may otherwise have been lost.

4.3 Crisis Management Experience is Essential

With regard to the staffing of a Joint Operations Committee, the components of a local disaster management team (JOC) have been identified, with the key criteria being extensive experience in disaster/crisis management (*See Appendix A – Composition & Process, and Appendix B – Core Roles*).

We have identified an ex-Australian Defence Forces (ADF) Specialist Reservist Wing Commander. This individual has served as the Health Component Commander (J07) for the ADF Middle-East Area of Operations (including Iraq, Afghanistan, UAE), with duties including:

- Planning and coordinating health support
- Assisting personnel, operations and intelligence staff with battle casualty and disease and non-battle injury estimates and statistics
- Providing casualty regulation and health surveillance
- Liaising about casualty evacuation
- Managing operational health data
- Monitoring strengths and allocation of health resources
- Controlling health material and consumables

We believe this is a skill-set that would be ideally suited to the role of JOC Co-ordinator.

The Soldier On[15] Foundation is a source of ex-ADF members with skill sets particularly applicable in this situation, and Dr Bridger is communicating with them about potential candidates. It is unlikely that any civilian agency has the staff that will be able to operate with the skill level and the tempo required for this situation. At the time of writing, both a potential logistician and administration manager have been identified.

Important distinctives of a JOC include:

- Independence
    - Avoids perceptions of bias
- Flexibility
    - Rapid adaptation and response to crisis situations
- Co-ordination
    - Each representative continues to lead and focus on their own group

[15] https://soldieron.org.au/

5 Conclusion

It is only by a whole-of-system approach that our region can be best prepared for what is coming. The best whole-of-system approach involves a systematic process of identifying and mitigating risks in as many organisations as possible that provide patient care services; then providing a means for co-ordinating a multi-service response to realised risks.

6 Recommendations

- That support be given to the formation of a local COVID-19 Joint Operations Committee, including from:
    - HNECCPHN
    - HNELHD
    - NSW State Health
- That consideration be given to the structure and funding of the JOC
- That the JOC be operationalised as rapidly as possible

7 Appendix A - Composition and Process

7.1 Objective

To facilitate a joint approach to the determination and instigation of a co-ordinated health response to the COVID-19 pandemic within the Hunter New England region with a view to improving health outcomes for residents of the region.

7.2 Scope

To include a representative of each health and community care agency to ensure a co-ordinated, independent and integrated health response.

7.3 Composition

7.3.1 Core members

- Joint Operations Co-ordinator
- Project Manager
- Logistician
- Administration Manager
- Communications Manager
- Health Planner

7.3.2 Representatives or clinical leads of

- PHN representative
    - General Practice
- LHD
    - Public Health/Infectious diseases
    - Emergency Departments
    - Outpatients
    - Mental Health
- Fever clinics
- Pharmacy
- Dental
- Pathology
- Community Care
- Aged Care (Residential & Community)
- Homeless services
- Ambulance
- Police
- Fire Brigade
- Charity sector
- Religious community
- Funeral Directors
- Local councils
- State government representatives (?)
- Business Council

- Defence

It would be expected that one designated person be assigned to these roles, however in the context of the pandemic, substitutes will be accepted. Substitutes must be up to date with the process within their designated area.

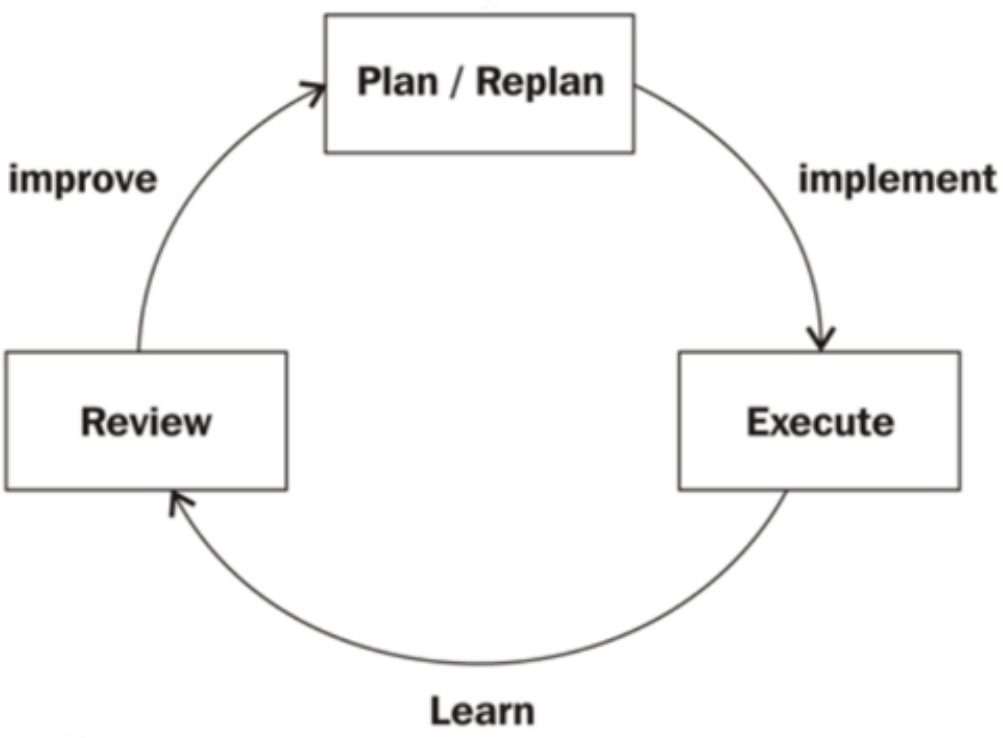
Representatives must be authorised to speak on behalf of each organisation.

7.4 Process

This rests on the completion of a risk matrix for the region and completion of risk matrices for each area by the designated representatives supported by the Joint Operations Committee (JOC) risk matrix. This dictates the hierarchy of risks which facilitates planning to ameliorate these risks.

The overarching risk matrix is the Hunter New England area risk matrix. This may be modified in accordance with reviews of individual area matrices.

Co-ordinated plans are to be developed, approved by representative groups and instigated by organisations. Individual plans must support the high-risk areas within the regional matrix and are to be advised to the Joint Operations Committee. Time is of the essence and matrices must be completed expeditiously. Regular reviews of plans are to be conducted in accordance with general principles as below.



The planning and review processes are to be timely and regularly reviewed. Timeliness is to be accepted within hours or days, not weeks.

Services directories for the vulnerable are typically readily available (e.g. the City of Newcastle Seniors Directory[16], Hunter Homeless Connect[17], Upper Hunter Community Services Inc.[18]) and would provide the basis for expediting contact with and inviting the participation of relevant organisations.

The JOC will specifically serve as conduit for health data intelligence between participating organisations

7.5 Support from Organisations – "Buy-in"

The JOC will not have statutory authority. In that context, the success of this group is dependent on the buy in of organisations as above. 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 the Joint Operations Committee (JOC), 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 committee with extensive crisis 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. HNELHD, HNECCPHN)
- 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 Hunter region following identification of high-risk elements within the Hunter matrix

[16] https://www.newcastle.nsw.gov.au/Community/Community-Services/Seniors
[17] http://www.hunterhomelessconnect.org.au/
[18] https://www.uhcs.org.au/index.php/directory

7.6 Demonstration of effectiveness - Measurables

- development of mitigation plans utilising multi-service responses
- management of realised risks using a co-ordinated multi-service response
- continued participation by groups
- regular reporting by groups, both individual groups to the JOC and by JOC 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*)

8 Appendix B - Core Roles

8.1 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

8.2 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

8.3 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

8.4 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

8.5 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

8.6 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

9 Appendix C - 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.

9.1 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***

9.2 On-costs

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

9.3 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

10 Appendix D – 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 information resides. Need to be able to tap into from anywhere	Central point where everything lives. Make sure we are all talking off the same page. Provide access to specific areas for specific people or groups.	Admino, Di, Lee, Gino	03-Apr-20	25-Mar-20		25/3/20 - established OneDrive as interim file sharing solution

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	Admino, Di Lee				

		(e.g. Healthpathways, GPDA mail group)					
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				

11 Appendix E – 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	Consultations undertaken unneccessarily.	Practice becomes overloaded, functional disruption,	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

	non symptomatic)		potential transmission										
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 indications (P2/N95)	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
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 unnecessary testing;	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
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 livers, etc)	Lack of sufficient patient care	Sub optimal health outcome, potential transmis	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

			sion of 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, absence from work 2. Increased	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

			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 facilities (RACF)	Practice unable to support palliation process	Distress to the patient. Distress to family, RACF's, support staff and clinicians	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		

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 inconsistent outcomes	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		
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.	inability to undertake caring roles or provide assistance to clientele due to reduced volunteers, inability to provide PPE to	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=UU3HGmC5uTCNcJDwGQlXAbCw) 3. provide these organisations	C - Possible	2 - Minor	C2

	community aged care, disability services, outreach to isolated elderly)	visitors and clientele								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)			
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 pathology, GP pop ups)	Uncoordinated approach to general screening and testing protocol	Suboptimal use of limited resources, increased risk of exposure	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
40	Test results	Delays of pathology results	Potential increased exposure, lack of timely response to patients needs	Patients	B - Likely	3 - Moderate	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/clinicians	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	Recoverey 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/clinicians	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 context of non hospital death) 5. Facilities for body storage 6. Internment	Suboptimal management of mortuary affairs	Patients/families/ staff	B - Likely	3 - Moderate	B3	Low	No	Liaise with providers	B - Likely	3 - Moderate	B3

		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