

1 April 2020

██████████
Via email: ██████████

Response to a request for official information

Dear ██████████

Thank you for your request for official information received 17 February 2020 by Nelson Marlborough Health (NMH)¹, followed by transfer of Part 2 Q3 / Part 3 Q5 / Part 6 / Part 7 to the Ministry of Health (MoH) 21 February 2020, necessary extension of time 13 March 2020, and notice of decision 15 April 2020, where you seek information we hold relating to COVID-19 (“Coronavirus”) Pandemic Preparations.

Information / Data Quality Assurance

Please see our response directly below each question, of which each response is to the best of our knowledge as at 1 April 2020.

1. Availability of Intensive Care Unit (ICU) beds and oxygen delivery machinery

A recent paper states that 23% of COVID-19 cases/hospital admissions require ICU treatment. This is similar to official Singapore numbers that as of February 14, seven of 43 current cases (16%) in Singapore are currently in the ICU (and the ICU admissions rate is fluctuating daily as new cases come and go).

Trivial non-expert estimation of a moderate 12-month epidemic assuming 20% requiring ICU and 6 ICU days per case shows New Zealand may require a minimum of 700 ICU beds able to care for infectious patients.

Total Cases	Cases / Month	20% ICU	ICU Beds
20,000	1,667	333	56
50,000	4,167	833	139
100,000	8,333	1,667	278
250,000	20,833	4,167	694
500,000	41,667	8,333	1,389
1,000,000	83,333	16,667	2,778

In a recent paper, of 36 ICU cases, 4 (11.1%) received high-flow oxygen therapy, 15 (41.7%) received non-invasive ventilation, and 17 (47.2%) received invasive ventilation (4 were switched to extracorporeal membrane oxygenation). This indicates that in even a moderate pandemic, demand on facilities and equipment will be challenging.

- 1. Has your agency done detailed expert modelling to model the amount of resources (healthcare workers, machines, ICU beds etc) necessary to respond to certain levels of COVID-19 case numbers with consideration to the specific nature of the COVID-19 disease? If yes, please supply the information.**

NMH response

We are working nationally to undertake ICU planning.

¹ Nelson Marlborough District Health Board

- 2. What is the total number of ICU beds, capable of caring for infectious patients without undue risk to healthcare workers and other patients, currently operational in your region?**

NMH response

We have "flex" ICU beds available depending on the pandemic needs; we have up to 7 beds in a non-pandemic demand situation.

- 3. On average, at any given time, approximately and generally, how many of these ICU beds are available to receive new patients?**

NMH response

The ICU bed numbers fluctuate depending on acute demand so there is no average availability.

- 4. How many machines capable of high-flow oxygen therapy does your region have?**

NMH response

19 High-flow oxygen devices.

- 5. How many machines capable of non-invasive ventilation does your region have?**

NMH response

13 Non-invasive ventilation devices.

- 6. How many machines capable of invasive ventilation does your region have?**

NMH response

5 Invasive ventilators that are also capable of non-invasive ventilation.
4 Transport ventilators that are also capable of non-invasive ventilation.
2 Neonatal ventilators.

- 7. How many machines capable of extracorporeal membrane oxygenation (ECMO) does your region have?**

NMH response

We do not utilise this item.

2. Emergency procurements

Considering the following list of materials, medicines and items.

1. P2/N95 Masks.
2. PPE Goggles.
3. PPE Face Shields.
4. PPE Gowns.
5. PPE Hazmat/coverall suits.
6. Machines and related supplies for High-flow oxygen therapy.
7. Machines and related supplies for Non-invasive ventilation.
8. Machines and related supplies for Invasive ventilation.
9. Machines and related supplies for extracorporeal membrane oxygenation (ECMO).
10. Other materials, machines and medicines that medical experts have advised you will help to respond to a COVID-19 epidemic.

The National Reserve Supply does not appear to contain many of those items and primarily contains medication for the treatment of and vaccination against influenza, which are not effective with COVID-19. Further, it states that DHBs are responsible to store PPE according to their needs.

I request the following information:

- 1. How many of each of those 10 items does your region currently have suitable for use in a COVID-19 outbreak with consideration to the specific nature of the COVID-19 disease?**

NMH response

Stock levels are continually assessed and updated. Stock holding as at 1 April 2020:

1. P2/N95 Masks: 679 boxes of 50
 2. PPE Goggles: 1467
 3. PPE Face Shields: 33 boxes of 25
 4. PPE Gowns: 25,240
 5. PPE Hazmat/coverall suits: n/a
 6. Machines and supplies for High-flow oxygen therapy: Please refer Part A Q4
 7. Machines and supplies for Non-invasive ventilation: Please refer Part A Q5
 8. Machines and supplies for Invasive ventilation: Please refer Part A Q6
 9. Machines and supplies for extracorporeal membrane oxygenation: Please refer Part A Q7
 10. Other materials, machines and medicines that medical experts have advised you will help to respond to a COVID-19 epidemic: Please refer above.
- 2. Has your agency undertaken any consultation with medical experts since January 15, 2020, regarding what numbers and types of medical equipment will be necessary to respond specifically to a COVID-19 epidemic, reducing healthcare worker infections and lowering the Case Fatality Rate? And have these consultations taken into account the latest scientific papers being released regarding COVID-19?**

NMH response

Yes.

3. Documents related to the inability to provide hospital care

Page 130 of the NZIPAP states:

As demand in a moderate to severe pandemic is likely to exceed supply, public and private hospitals will need to prioritise admissions, rationalise non-acute services and review staff rosters. Capacity to admit people to hospital during the Manage It phase is likely to be limited during a mild to moderate pandemic and considerably constrained during a severe pandemic. District health boards will need to liaise with local councils, CDEM groups and voluntary groups, who can then assist in providing community care.

- 1. Please provide any documents relating to the meaning of “community care” and what medical care from qualified medical workers and medical equipment and medicines will be provided to COVID-19 patients in “community care”?**

NMH response

As 80 – 82 % of people who contract COVID-19 will have mild symptoms, they will be self-managed. Patients who require higher levels of care will be supported by hospital services.

- 2. Given that recent papers and official Singapore MOH statistics show that approximately ~20% of COVID-19 admissions require oxygen treatment/ventilation, has your agency done any modelling on the number of COVID-19 patients who will likely need hospital/ICU treatment but be unable to obtain it due to hospital overload, depending on various ranges of COVID-19 case numbers? If yes, please supply documents.**

NMH response

A Technical Advisory Group has been initiated with one of their functions to consider the management of critically ill patients testing positive for COVID-19 and minimising risk to staff.

- 3. If it is justified that the treatment of COVID-19 patients, who would normally be cared for in ICU/hospital, is instead done by volunteer groups without medical training or advanced equipment, has your agency considered undertaking:**

- a. *Emergency procurements of relevant medical devices and equipment listed in question 2, to at least provide these volunteer groups with medical equipment such as oxygen ventilators and;*
- b. *Emergency training of these unqualified volunteers in the basic care of COVID-19 patients and the use of these medical devices and equipment, in order to increase the survival rates of those unable to be cared for in medical facilities? If yes, please provide documents relating to these emergency plans.*

NMH response

We intend to follow the advice set out in “Getting Through Together: Ethical Values for a pandemic”, published by the National Ethics Advisory Committee:

<https://neac.health.govt.nz/system/files/documents/publications/getting-through-together-jul07>

4. *What is the number of unqualified volunteers/workers available from CDEM and voluntary groups in your region available to care for patients when hospitals and other medical facilities cannot provide care? How recent is this information?*

NMH response

Information not held.

4. Documents related to emergency planning for mass infection of healthcare workers

In a recent paper regarding admissions in a hospital, 41% of 138 hospitalized COVID-19 patients were infected in hospital (“nosocomial” infections). 29% of the 138 patients were healthcare workers.¹¹ As of February 12, two of the eight cases (25%) in the UK are healthcare workers. China’s National Health Commission has stated 1700 healthcare workers have been infected in China.

1. *Does your agency have emergency plans to replace healthcare workers as they become infected? If yes, please supply documents you have relating to such plans.*

NMH response

This would be arranged through the National Health Coordination Centre, led by the Ministry of Health.

5. Expansion of test capacity

1. *What is the number of SARS-CoV-2 tests that can be performed in your region in a 24 hour period?*

NMH response

Availability of testing is via referral of the sample to ESR laboratory in Wellington or Canterbury Health Laboratories. As at 1 April 2020, there was no availability of testing in Nelson Marlborough and capacity for testing at the referral laboratories was 100-200 per day with ability to upscale to 1000 a day, if required.

2. *On average, how quickly can a test be performed from sample to result?*

NMH response

Ideally, the result would be available within 48 hours of sample, however this will depend on the time of day the sample is taken, to allow for transportation of the sample between laboratories.

3. *Do plans exist to expand this capacity and what is the projected capacity increase and date by which the increase will be achieved?*

NMH response

Expansion within Nelson Marlborough is currently underway with COVID-19 PCR testing due to be operational by late April. The intent is to be able to test up to 100 samples a day on site at Nelson Hospital as part of the overall national increased testing capacity plan.

8 Meetings in your region related to COVID-19 pandemic preparations

1. ***Since January 15, what leadership/committee meetings have occurred in your agency solely related to preparations for a potential COVID-19 pandemic?***

NMH response as at 1 April 2020:

Health Emergency Coordination Centre: 56 meetings
Public Health Emergency Operations Centre: 49 meetings
Community and Primary Emergency Operations Centre: 23 meetings
Hospital Emergency Operations Centre: 39 meetings
Technical Advisory Group: 12 meetings

2. ***Since February 1, what meetings have been held that included trained medical experts, to specifically discuss the latest clinical information regarding COVID-19 cases (E.G Lancet , NEJM , JAMA), and the projected requirements for equipment, ICU, beds, medicines and healthcare workers to respond appropriately to a potential COVID-19 pandemic, with specific consideration for the COVID-19 disease.***

NMH response as at 1 April 2020:

Technical Advisory Group: 12 meetings
Hospital Advisory Group: 16 meetings
Vulnerable Population Advisory Group: 8 meetings

3. ***Since January 15, what activities, such as additional training and simulations, have been undertaken related to preparations for a potential COVID-19 pandemic?***

NMH response as at 1 April 2020:

A number of simulated patient pathway exercises in both Primary and Hospital setting.
Contact tracing training for Public Health - Health Promotion Officers.

9 Emergency actions to secure your supply chains, particularly medical supplies

Scott Gottlieb, Former Commissioner of the U.S FDA, made a statement on February 12 to the Senate Committee on Homeland Security and Governmental Affairs on February 12, including the following:

*About 40 percent of generic drugs sold in the U.S. have only a single manufacturer. A significant supply chain disruption could cause shortages for some or many of these products. Last year, manufacturing of intermediate or finished goods in China, as well as pharmaceutical source material, accounted for 95 percent of U.S. imports of ibuprofen, 91 percent of U.S. imports of hydrocortisone, 70 percent of U.S. imports of acetaminophen, 40 to 45 percent of U.S. imports of penicillin, and 40 percent of U.S. imports of heparin, according to the Commerce Department. **In total, 80 percent of the U.S. supply of antibiotics are made in China.***

Taiwan has banned export of face masks. India has banned export of PPE and n95 masks. The Secretary General of the Indian Drug Manufacturers Association, which represents over 900 drug producers, has said he expects drug supplies to be disrupted from April.

New Zealand's medical supply chains are likely to be just as, or more vulnerable as the United States.

New Zealand's National Reserve Supply only stores a small range of items¹⁸, most of which are only relevant to responding to an influenza pandemic (e.g antiviral drugs and vaccines that are not effective against SARS-CoV-2), and certainly not supplies related to maintaining the general needs of your region's healthcare during supply chain disruptions.

1. ***Please provide information relating to any emergency actions, not normally undertaken, underway since January 1 2020, to secure supplies of medical equipment and supplies for your day to day healthcare provisioning obligations.***

NMH response

Efforts continue to be made to secure our normal supply chain.

This response has been provided under the Official Information Act 1982. You have the right to seek an investigation by the Ombudsman of this decision. Information about how to make a complaint is available at www.ombudsman.parliament.nz or free phone 0800 802 602.

If you have any questions about this decision please feel free to email our OIA Coordinator OIArequest@nmdhb.govt.nz. I trust that this information meets your requirements. NMH, like other agencies across the state sector, supports the open disclosure of information to assist the public's understanding of how we are delivering publicly-funded healthcare. This includes the proactive publication of anonymised Official Information Act responses on our website from 10 working days after they have been released. If you feel that there are good reasons why your response should not be made publicly available, we will be happy to consider.

Yours sincerely

Dr Peter Bramley
Chief Executive

cc: Ministry of Health via email: SectorOIA@moh.govt.nz